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Brigham Daniels

Andrew P. Follett

Joshua Davis

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BRIGHAM DANIELS,† ANDREW P. FOLLETT,† & JOSHUA DAVIS†

The 1970 Clean Air Act is arguably Congress' most important environmental enactment. Since it became law fifty years ago, much could be and has been said about how it has changed both the physical environment and the contours of environmental law. Much less, however, has been written on the genesis of the Act itself. Where its history is discussed, it is often segmented or heavily summarized.

In this Article, we take on the story of how the Act came to be as well as how early enforcement practices cemented its importance in the legal landscape. To do so, we rely upon an unprecedented analysis and synthesis of previously underexplored strands of the story, incorporating many unmined sources and original research. This story weaves together the contributions of officials and staff in the Nixon Administration, Congress, and the judiciary to provide what is hoped to be an integrated, meaningful, and readable account of the making of the Clean Air Act.

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† Professor of law, BYU Law School. The original histories, documents, and interviews found in this Article are the product of nearly eight years of his original research. The primary and secondary sources Daniels has assembled tell a larger story of the birth of environmental law than can be found in this Article, and he intends to take the issue up in a future book. For the helpful comments offered on previous drafts of the larger project, Daniels wishes to thank the participants of the 2019 UCLA Environmental Colloquium, 2019 Environmental Law Professors Works in Progress Series, 2018 CUNY Law School Environmental Law Presentation, 2017 Environmental Workshop co-sponsored by Colorado, Yale, Duke, and UCLA law schools, as well as the participants of the 2018 Rocky Mountain Mineral Law Foundation's Natural Resource Teachers' Conference, the 2017 Vermont Law School Environmental Colloquium, and an internal work-in-progress at BYU Law School. Daniels particularly thanks Jim Salzman, Jed Purdy, Ann Carlson, Alex Camacho, Carol Rose, Monika Ehrman, Blake Hudson, William Boyd, Jonas Monast, Joel Mintz, Rebecca Bratspies, Jessica Owley, Justin Pidot, Doug Kysar, and Sarah Krakoff. He also recognizes the thoughtful comments of two valued colleagues who have since passed on, John Nagle and Fred Cheever. Daniels also thanks the many research assistants who have helped organize and transcribe the original research materials cited in this Article. We also appreciate the excellent work of the editors of the Hastings Law Journal who collectively improved the article through their diligence.

† J.D. Candidate, Yale Law School '23.

† J.D. Candidate '23.

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INTRODUCTION

Fifty years ago, as the 1970 Clean Air Act Amendments passed through Congress, Senator Eugene McCarthy captured the progressive spirit of the era when he stated that clean air seemed to represent "an issue that's better than motherhood."[1] Indeed in 1970, the environment as a whole was "the golden child, the exclusive and favorite national concern."[2] One polemic from the era opined that "the businessman-industrialist awaits in frightened expectation; the activist-conservationist in childlike frenetic excitation."[3] In fact, White House polling data from the period reveals that environmental protection was one of the biggest concerns on the minds of the American people, only trailing behind the Vietnam War and the state of the economy.[4]

Air pollution, the budding environmental movement's "God and motherhood"[5] issue, was front and center, and the legislation process of the Clean Air Act ("the Act") best captured the bipartisan zeitgeist and political urgency of the time. It is hard to overstate how important the passage of the Clean Air Act has been for the evolution of environmental law—before the Clean Air Act, environmental law as we know it today was hardly a recognized discipline of study.[6] In fact, nothing that could be characterized as meaningful pollution-control law by modern standards could be found in U.S. Code before 1970.[7] Congress crafted and put to the test many of the most innovative aspects of U.S. environmental law, several of which would later be replicated in the suite of laws that would come to comprise the core of American environmental law.[8]

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1. Memorandum from Leon Billings, former Staff Dir., U.S. Senate Env't Subcomm., to Personal Files 1 (on file with authors as Muskie 1–15).

2. RUSSELL E. TRAIN, POLITICS, POLLUTION, AND PANDAS: AN ENVIRONMENTAL MEMOIR 201 (2003) (quoting Linda Ba Thung, an environmental reporter).

3. Joseph H. Thibodeau, *Michigan's Environmental Protection Act of 1970: Panacea or Pandora's Box*, 48 J. URB. L. 579, 598 (1971).

4. Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to President Richard Nixon (June 29, 1971) (on file with authors as Nixon 2-70) (including polling data from Benham poll).

5. Editorial, *Environment in Politics*, SARASOTA (FLA.) HERALD-TRIB. (on file with authors as Nixon 4-16).

6. James L. Huffman, *The Past and Future of Environmental Law*, 30 ENVTL. L. 23, 27–28 (2000) (explaining that the first environmental law journal was not introduced until 1969 at Lewis and Clark, and that it took about a decade before environmental law was generally offered across the country); Richard J. Lazarus, *Environmental Scholarship and the Harvard Difference*, 23 HARV. ENVTL. L. REV. 327, 341 (1999) ("Environmental law did not emerge as a distinct category of legal scholarship until approximately 1973."); J.B. Ruhl & James Salzman, *Climate Change Meets the Law of the Horse*, 62 DUKE L.J. 975, 982 (2013) ("The very term 'environmental law' did not even exist before 1969.").

7. Todd S. Aagaard, *Environmental Law as a Legal Field: An Inquiry in Legal Taxonomy*, 95 CORNELL L. REV. 221, 223 n.2 ("The first major federal environmental case, *Scenic Hudson Preservation Conference v. Federal Power Commission*, 354 F.2d 608 (2d Cir. 1965), was decided in 1965. The first modern federal environmental statute, the National Environmental Policy Act ("NEPA"), 42 U.S.C. §§ 4321–4370f (2006), was signed into law on January 1, 1970.").

8. RICHARD J. LAZARUS, THE MAKING OF ENVIRONMENTAL LAW 79–84 (2004) (calling the 1970s a "new era" for environmental protection and detailing numerous legal innovations that emerged during that time); Daniel Riesel, *Forecasting Significant Air Act Implementation Issues: Permitting and Enforcement*, 14

Although environmental protection would not retain its untouchable political popularity for long,[9] the legacy of the Clean Air Act is difficult to overstate; it has demonstrably altered the chemical and material composition of American air, particularly in heavily populated urban areas.[10] These gains are more than blue skies—clean air has spared many, especially in historically marginalized communities, from illness and premature death.[11] The Clean Air Act, including through later rounds of amendments,[12] has been a primary tool used by the United States to combat acid rain,[13] and, in the last decade, has been seen by many, including the Obama Administration, as a potential tool for regulating carbon emissions in response to global climate change.[14]

We echo the assertion of Senator John Sherman Cooper, who helped author the Act, that the Clean Air Act may be among the "most significant measure[s] in the domestic sense of legislation in any congress."[15] Its importance justifies this golden-anniversary investigation into its genesis and the people who have made it. In this Article, we argue that the content and legacy of the Clean Air

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PACE ENVTL. L. REV. 129, 129 (1996) ("The Clean Air Act (CAA) was the original or flagship statute of the 1970 environmental revolution. All environmental statutes subsequent and prior to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) are closely based on the 1970 CAA pattern." (footnotes omitted)); *see also* Bruce M. Kramer, *The 1970 Clean Air Amendments: Federalism in Action or Inaction?*, 6 TEX. TECH L. REV. 47, 47 (1974) ("The Clean Air Act, as it now stands, is a pioneering document that reflects tremendous credit on the skill, wisdom and foresight of its draftsmen. However, as a pioneering document, it incorporates many previously untested provisions" (quoting Arthur C. Stern, *Strengthening the Clean Air Act*, J. AIR POLLUTION CONTROL ASS'N, 1019, 1020 (1973)).

9. *See infra* Subpart IV.B.

10. *See, e.g.,* Michael Greenstone, *Estimating Regulation-Induced Substitution: The Effect of the Clean Air Act on Water and Ground Pollution*, 93 AM. ECON. REV. 442, 443–47 (2003).

11. *See, e.g.,* Kimberly M. Castle & Richard L. Revesz, *Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations*, 103 MINN. L. REV. 1349, 1394 (2019); Samuel J. Rascoff & Richard L. Revesz, *The Biases of Risk Tradeoff Analysis: Towards Parity in Environmental and Health-and-Safety Regulation*, 69 U. CHI. L. REV. 1763, 1766 (2002).

12. *See generally* Adam Babich, *Back to the Basics of Antipollution Law*, 32 TUL. ENVTL. L.J. 1 (2018) (discussing the 1977 and 1990 amendments); Samuel Hays, *Clean Air: From the 1970 Act to the 1977 Amendments,* 17 DUQ. L. REV. 33 (1977) (same); David Schoenbrod*, Goals Statutes or Rules Statues: The Case of the Clean Air Act*, 30 UCLA L. REV. 740 (1983) (discussing the 1977 Amendments extensively); Henry A. Waxman, *An Overview of the Clean Air Act Amendments of 1990*, 21 ENVTL. L. 1721 (1991) (discussing the 1990 amendments).

13. *See, e.g.,* JAMES L. REGENS & ROBERT W. RYCROFT, THE ACID RAIN CONTROVERSY (2d prtg.1989); Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L.J. 931, 982 (1997); Brennan Van Dyke, *Emissions Trading to Reduce Acid Deposition*, 100 YALE L.J. 2707, 2708 n.9 (1991).

14. *See, e.g.,* Castle & Revesz, *supra* note 11, at 1350; Howard M. Crystal et al., *Returning to Clean Air Act Fundamentals: A Renewed Call to Regulate Greenhouse Gases Under the National Ambient Air Quality Standards (NAAQS) Program*, 31 GEO. ENVTL. L. REV. 233, 284–85 (2019); Holly Doremus & W. Michael Hanemann, *Of Babies and Bathwater: Why the Clean Air Act's Cooperative Federalism Framework Is Useful for Addressing Global Warming*, 50 ARIZ. L. REV. 799, 800 (2008); Christopher T. Giovinazzo, *Defending Overstatement: The Symbolic Clean Air Act and Carbon Dioxide*, 30 HARV. ENVTL. L. REV. 99, 100 (2006); Craig N. Oren, *Is the Clean Air Act at a Crossroads?*, 40 ENVTL. L. 1231, 1249–54 (2010); Craig N. Oren, *When Must EPA Set Ambient Air Quality Standards? Looking Back at* NRDC v. Train, 30 UCLA J. ENVTL. L. & POL'Y 157, 157–58 (2012); Nathan Richardson, *Greenhouse Gas Regulation Under the Clean Air Act: Does* Chevron *Set the EPA Free?*, 29 STAN. ENVTL. L.J. 283, 284 (2010).

15. *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the S. Comm. on Pub. Works*, Exec. Sess. 491 (Sept. 11, 1970) (statement of Sen. John Sherman Cooper).

Act can be fully appreciated only when supplemented with an understanding of the political context and key players behind it. The story of the passage of the Act would likely surprise even well-informed students of environmental legal history: many of its most important provisions were the product of tobacco-smoke-filled, closed-door deliberations filled primarily with decided non-environmentalists. In fact, some of its most significant innovations, such as national standards, came from the conservative Nixon Administration itself. Furthermore, the dedicated early enforcement of the Act, which made it legitimate and lasting, came by the hands of Nixon-appointees.

While there are some notable pieces of writing which deal with the Clean Air Act's making (a brief history is often offered when the Act is analyzed),[16] the focus of existing literature rests on practical effects of the law and the regulatory tools it created. Thus, the "told story," which this Article supplements, is an admittedly short tale.[17]

The highlights of the "told story" are as follows: In the late 1960s and early 1970s, a number of factors made environmental issues politically salient, including the first Earth Day, the popularity of Rachel Carson's *Silent Spring*, and various environmental disasters.[18] Congress responded to this pressure by trying to further environmental legislation, including revamping existing federal pollution law.[19] In 1970, President Nixon, driven by politics, attempted to claim a share of the spotlight by calling on Congress to craft even more aggressive and comprehensive environmental laws, including an improved Clean Air Act.[20]

16. *See generally* CHRISTOPHER J. BAILEY, CONGRESS AND AIR POLLUTION: ENVIRONMENTAL POLICIES IN THE USA (1998); J. BROOKS FLIPPEN, NIXON AND THE ENVIRONMENT (2000); LAZARUS, *supra* note 8; R. SHEP MELNICK, REGULATION AND THE COURTS: THE CASE OF THE CLEAN AIR ACT (1983); E. Donald Elliott et al., *Toward a Theory of Statutory Evolution: The Federalization of Environmental Law*, 1 J.L. ECON. & ORG. 313 (1985); Jody Freeman & David B. Spence, *Old Statutes, New Problems*, 163 U. PA. L. REV. 1 (2014); Richard J. Lazarus, *Senator Edmund Muskies's Enduring Legacy in the Courts*, 67 ME. L. REV. 240 (2015); Robert V. Percival, *Environmental Federalism: Historical Roots and Contemporary Model*s, 54 MD. L. REV. 1141 (1995); Joseph L. Sax, *Environmental Law at the Turn of the Century: A Reportorial Fragment of Contemporary History*, 88 CALIF. L. REV. 2375 (2000); Russell E. Train, *The Environmental Record of the Nixon Administration,* 26 PRESIDENTIAL STUD. Q. 185 (1996); McNollgast, *Legislative Intent: The Use of Positive Political Theory in Statutory Interpretation*, 57 LAW AND CONTEMP. PROBS. 3, 29–31 (1994); Craig N. Oren, *Clearing the Air: The McCubbins-Noll-Weingast Hypothesis and the Clean Air Act*, 9 VA. ENVTL. L.J. 45, 80–97 (1989).

17. We use the description of the "told story" in a descriptive and not in a derogatory way; each element of the told story is true, descriptive, and meaningful. We recognize that much that has been told was untold before it was written. Our hope is that this Article will likewise find a home in the "told story" and serve as platform for others build upon.

18. Huffman, *supra* note 6, at 24 ("Rachel Carson's Silent Spring was a key catalyst for widespread public concern about the health impacts of various human activities.").

19. Elliot et al., *supra* note 16, at 321 (noting the complex, "more subtle," and decentralized sort of influence the grassroots movement exerted on policymaking institutions, while still recognizing the practical effects of such mass-movement pressure).

20. *See* FLIPPEN, *supra* note 16, at 76–77; LAZARUS, *supra* note 8; Elliot et al., *supra* note 16, at 324, 333–39 (suggesting that Muskie and President Nixon were caught in a "politicians' dilemma," where passage of the Clean Air Act of 1970 took "a form which was more stringent than either of them would have preferred" as a

Senator Muskie, propelled by presidential ambitions, upped the ante again by pushing through Congress the remarkably comprehensive 1970 Clean Air Act Amendments.[21]

One deterrent to expanding beyond these key elements of the told story is undoubtedly the Act's inherent complexity. In overcoming this barrier, this Article takes advantage of the passage of the last half-century, retrospectively identifying the most critical aspects of the law and, in turn, telling the story of the making of these portions of the Act, including those provisions which have demonstrated the greatest effects on both air quality and environmental law. Because we want to recount and analyze the Act's history in a comprehensive and readable way, we blend the told story with previously underexplored perspectives, many growing out of unpublished primary sources and original research.

First, in Part I, we explore the political environment of the Clean Air Act, including the beginnings of the environmental movement in general and the active, and at-times unappreciated, role that the Nixon White House had in shaping the early Clean Air Act. We set the scene for the 1970 environmental thrust by outlining how the environment became the "God and motherhood issue," and how it was adopted by Nixon despite mixed opinions from various members of his Administration, including the President himself. In particular, we note the significant role the Administration played in coaxing a strong, federal Clean Air Act from Congress and how its proposals affected the trajectory of the bill.

Part II explores the legislative process of the Clean Air Act, focusing primarily on the Senate, in order to demonstrate how key players in the Air and Water Pollution Subcommittee transformed earlier air pollution legislation by incorporating novel policy tools. Specific actions taken by Chair Edmund Muskie illuminate and justify the generally accepted claim that Muskie was the primary mover of the bill. More significantly, however, while still recognizing Muskie's primary role in the legislation, we tease out the undervalued role and contributions of other members of the Public Works Committee and Air and Water Pollution Subcommittee. We pay particular focus to the genesis of

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result of a kind of "policy escalation"), *quoted in* Robert F. Blohmquist, "*To Stir Up Public Interest": Edmund S. Muskie and the U.S. Senate Special Subcommittee's Water Pollution Investigations and Legislative Activities, 1963–66—A Case Study in Early Congressional Environmental Policy Development*, 22 COLUM. J. ENVTL. L. 1, 13 n.42 (1997); Joel K. Goldstein, *Edmund S. Muskie: The Environmental Leader and Champion*, 67 ME. L. REV. 226, 226 (2015); Robert Gottlieb, *The Next Environmentalism: How Movements Respond to the Changes that Elections Bring—From Nixon to Obama*, 14 ENVTL. HIST. 298, 302 (2009); Alfred Marcus, *Environmental Protection Agency*, in THE POLITICS OF REGULATION 267, 267–68 (James Q. Wilson ed., 1980); David Vogel, *A Big Agenda*, 11 WILSON Q. 50, 57–58 (1987).

21. *See* Elliott et al., *supra* note 16, *cited in* David Gerard & Lester B. Lave, *Implementing Technology-Forcing Policies: The 1970 Clean Air Act Amendments and the Introduction of Advanced Automotive Emissions Controls in the United States*, 72 TECHNOLOGICAL FORECASTING & SOC. CHANGE 761, 766 (2005). Muskie is often, but not always, credited alone. For exceptions, see Leon G. Billings, *Edmund S. Muskie: A Man with a Vision*, 67 ME. L. REV. 234, 235 (2015).

technology forcing (composed of statutory deadlines and standards), shared federalism, citizen suits, and mandatory performance by government agencies.

In Part III, we build on the explorations of Part II as the story of the Clean Air Act continues through conference committee and its signing, which is highlighted by a power struggle between Senator Muskie and President Nixon. This Part complements the building narrative of the earlier legislative process and creates a through-line to the period of the early Environmental Protection Agency's regulatory programs.

Part IV continues into the early enforcement era (reaching the first years of the Ford Administration) and argues that key decisions made by early EPA Administrators William Ruckelshaus and Russell Train, sometimes upon the intervention of the courts (and usually with constant congressional oversight), were crucial in defining the efficacy and trajectory of the Clean Air Act. Thus, Part IV extends our analysis outside of the Congress and considers the Act as it exists today as the product of all branches of government.

I. NIXON RESPONDS TO POPULAR DEMAND FOR ENVIRONMENTAL PROTECTION

This Part details the rise to prominence of the environment as a political issue, as well as President Richard Nixon's response and actions, which we recognize were driven largely by political necessity. Gradual momentum for political change on the environmental front began more than a decade before the passage of the Clean Air Act and greatly accelerated in the last years of the 1960s.[22] Congress began flirting with federalizing air pollution control as early as 1955 in the form of the inaptly named Air Pollution Control Act ("the APCA").[23] Although an important first step for Congress, the two-page APCA was extremely modest in scope. Rather than focus on regulation or the control of air pollution *per se*, the Act attempted to facilitate research, develop future technical means to reduce pollution, collect data, disseminate research findings, and offer assistance to states that volunteered to do something about local air pollution.[24] Ultimately, the APCA lacked any language to affirmatively compel governmental action on air pollution.[25]

22. Goldstein, *supra* note 20, at 27; Gottlieb, *supra* note 20, at 301.

23. Air Pollution Control Act, Pub. L No. 159-360, 69 Stat. 322 (1955).

24. *Id.* at 322–23, §§ 3–5; *see also* CLAYTON D. FORSWALL & KATHRYN E. HIGGINS, ENVTL. AND ENERGY SYS. INST., CLEAN AIR ACT IMPLEMENTATION IN HOUSTON: AN HISTORICAL PERSPECTIVE 1970–2005, at 17 (2005) (discussing how the EPA "promulgated its own plan to get Houston into attainment" when it determined that Texas's state implementation plan would not meet the ozone standard).

25. 1 TREATISE ON ENVIRONMENTAL LAW § 2.03, Lexis Advance (database updated Oct. 2019). After all, even though this enactment did not have much in the way of "teeth," so to speak, before any clean air statutes were formed, all that existed was the common law and some modest state statutes, most of them aimed at air pollution that created some statutorily defined nuisance. *E.g.*, CAL. HEALTH & SAFETY CODE §§ 24200–25946 (1976) (repealed 1986); SCOTT HAMILTON DEWEY, DON'T BREATHE THE AIR: AIR POLLUTION AND U.S. ENVIRONMENTAL POLITICS, 1945–1970 (2000).

In 1963, with Senator Ed Muskie now the first Chair of the Pollution Subcommittee, Congress took the APCA one step further by passing a federal Clean Air Act.[26] This enactment provided the federal government a regulatory role in air pollution control for the first time, though it was a relatively minor role that the Secretary of the Department of Health, Education, and Welfare (HEW) exercised with great discretion.[27] In particular, it authorized the regulation of federal stationary sources and accelerated research on the adverse health effects of air pollution.[28] Like the 1955 enactment, it was rooted in a strong presumption of unchallenged state primacy on regulating air pollution.[29] The 1965 Motor Vehicle Pollution Control Act,[30] which laid the foundation for the 1970 Clean Air Act's Title II, broadened the scope of regulated pollutants and acknowledged the automobile's place in the complex system of air pollution. To his credit, Muskie was early to the game of strong, dramatic air pollution legislation: as early as 1964 he described efforts to curb air pollution as a "war," for example—language that wouldn't become more mainstream until the following decade.[31]

Muskie's eagerness went unmatched in Congress, however,[32] and it was not until the 1967 Air Quality Act that the nation-wide struggle against air pollution began "in earnest" in the eyes of Congress.[33] The steps that this enactment took seem negligible in comparison with what would follow three years later; still, the 1967 Act succeeded in filling technical and knowledge gaps that earlier research-oriented bills sought (but ultimately failed) to fill. Similarly, although the Air Quality Act conformed to the pattern of previous amendments in incrementally deepening federal authority over air pollution, it maintained virtually unqualified state control of regulation and upheld variable standards in different regions of the country rather than a uniform national standard.[34]

Shortly after the 1967 Act, however, the political atmosphere shifted dramatically, setting the stage for a period of punctuated evolution in the law, which would match Muskie's rhetoric and legislative aspirations. The environment did not seize attention right away, however, because more immediate social issues were reaching their own boiling points: Civil Rights and

26. Clean Air Act, Pub. L. No. 88-206, 77 Stat. 392 (1963). It may be worth mentioning that this is the first Clean Air Act in name; thus, what we refer to as the Clean Air Act throughout this Article might be more fully referred to as the 1970 Clean Air Act Amendments.

27. *Id.* § 5, 77 Stat. at 396–98.

28. *Id.* § 7(a), 77 Stat. at 399; *id.* § 3, 77 Stat. at 394–95.

29. *See Id.* § 4(a), 77 Stat. at 395; *id.* § 5(b), 77 Stat. at 396 ("[M]unicipal, State, and interstate action to abate air pollution shall be encouraged and shall not be displaced by Federal enforcement action except as otherwise provided").

30. Motor Vehicle Air Pollution Control Act, Pub. L. No. 89-272, 79 Stat. 992 (1965).

31. 110 CONG. REC. 6261 (1964).

32. *See infra* Subpart II.B.

33. *Clean Air Act Amendments: Hearings on the Air Quality Act of 1967 Before the House Comm. on Interstate and Foreign Commerce*, 90th Cong., 1st Sess. 204 (1967).

34. Robert Martin & Lloyd Symington, *A Guide to the Air Quality Act of 1967*, 33 LAW AND CONTEMP. PROBS. 239, 243 (1968).

anti-Vietnam protests, and the assassinations of Martin Luther King Jr. and Robert Kennedy still dominated the national stage.[35] Despite considerable movement in Congress, such as a Joint House-Senate Colloquium on the issue of the environment and a national environmental policy,[36] the environment was not a widely recognizable or coherent political issue to the public, and was thus not a campaign issue for either party to any meaningful extent as late as the '68 Presidential race.[37]

Perhaps due to social unrest and public cynicism regarding the federal government, Congress began to coalesce in a bipartisan manner around many issues of public import,[38] something that probably worked in favor in Congress addressing air pollution. The cooperation found in Congress stood in stark contrast to the whirlwind surrounding it—Washington, D.C. was the eye of a storm of unrest and divisiveness: the Senate and House Office Buildings, as well as the Capitol itself, were sandbagged, and much of the city was engulfed in riots.[39] Protestors occupied government buildings and badgered congressional representatives for their failure to act meaningfully,[40] and smoke from congressional representatives' cigars competed for the air in the halls of the public congressional offices with that of demonstrators' marijuana.[41]

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35. For comprehensive discussions of the events of 1968, see MICHAEL A. COHEN, AMERICAN MAELSTROM: THE 1968 ELECTION AND THE POLITICS OF DIVISION (2016); LEWIS L. GOULD, 1968: THE ELECTION THAT CHANGED AMERICA (1993); MICHAEL NELSON, RESILIENT AMERICA: ELECTING NIXON IN 1968, CHANNELING DISSENT, AND DIVIDING GOVERNMENT (2014); DENNIS WAINSTOCK, ELECTION YEAR 1968: THE TURNING POINT (2012).

36. *See Joint House-Senate Colloquium to Discuss a Nat'l Policy for the Environment: Hearing on Before the S. Comm. on Interior and Insular Affairs & H. Comm. on Sci. & Astronautics*, 90th Cong. (1968) [hereinafter *Joint House-Senate Colloquium*].

37. *See* FLIPPEN, *supra* note 16, at 19–20; Interview with Tom Jorling, former Minority Counsel, U.S. Senate Comm. on Pub. Works, in Saranac Lake, N.Y. (Sept. 21, 2018). It is worth noting that although the environment issue was not hotly contested, it was not totally absent, either. For example, Nixon, made a statement addressing potential efforts to improve the urban environment—many of which might be considered environmental initiatives. *See* Statement of Richard M. Nixon, Republican Presidential Nominee, Statement in Miami, Fl. (Oct. 13, 1968) (on file with authors as Nixon 2-120) ("[W]e have been promised rebirth of our cities—promised improved transportation, pure air, clean water, and safe, quiet streets. Billions of our tax dollars were spent trying to keep those promises. But they were not kept. Our air is still fouled by pollutants. Our rivers and lakes are still unclean. . . . All pollution in one form or another violates the rights of individuals. Everyone has the right to be protected from bodily harm by others. And every poisonous particle that lodges in our lungs, every pieces of trash that litters our streets, every jarring noise that assails our eardrums was caused by someone. . . . Up to now, those who pollute have been largely subsidized at the expense of our physical and mental health. This can no longer continue. . . . [B]y failing to respond earlier to the challenge posed by new technology—[government] has been a passive, condoning partner in the creation of polluted cities.").

38. On the strong bipartisan effect, see Richard J. Lazarus, *The Tragedy of Distrust in the Implementation of Federal Environmental Law*, 54 LAW & CONTEMP. PROBS. 311, 323 (1991) (noting that the average vote in favor of federal environmental legislation during this decade was "seventy-six to five in the Senate and 331 to thirty in the House").

39. *See* BEN W. GILBERT, TEN BLOCKS FROM THE WHITE HOUSE: ANATOMY OF THE WASHINGTON RIOTS OF 1968 (1968); Denise Kersten Wills, *"People Were Out of Control": Remembering the 1968 Riots*, WASHINGTONIAN (Apr. 1, 2008), https://www.washingtonian.com/2008/04/01/people-were-out-of-control-remembering-the-1968-riots/; Interview with Tom Jorling, *supra* note 37.

40. Interview with Tom Jorling, *supra* note 37.

41. *Id.*

This political climate acted as a catalyst to the developing grassroots environmental movement.[42] Many members of Congress were eager to appease a growingly skeptical and divided public by demonstrating that they could effectively recognize and advance the public interest through flashy new legislative packages.

Some members of Congress saw an opportunity enact tougher legislation on the environment, for example, seeking to atone for "a sad and frustrating history of weak-kneed inaction," believing that they had "been charged with protecting the divine right of every citizen to breathe clean air."[43] A few months before movement on the Clean Air Act began, Senator Henry Jackson similarly justified the National Environmental Policy Act. A "primary purpose" of that Act, he said, "is to restore public confidence in the Federal Government's capacity to achieve important public purposes and objectives and at the same time maintain and enhance the quality of the environment."[44]

Vietnam, civil rights, and Soviet tension may all have been out of reach, but cleaning the air seemed to be attainable, and gains could be measured and seen. But for this cynicism and distrust of the government, it is highly unlikely that the environmental movement itself, growing since the early 1960s, would have resulted in the strong iteration of the Clean Air Act which we now have.[45] At the turn of the decade, a perfect storm of events focused the nation's attention on the problem of environmental quality in particular, channeling general unrest into new vessels of "ecology": an unprecedented environmental disaster arising from the Santa Barbara oil spill.[46] As the nation began to focus on the

42. Elliott, et al., *supra* note 16, at 321.

43. HOUSE CONSIDERATION OF THE REP. OF THE CONF. COMM., at 7 (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 116 (1974).

44. *See* National Environmental Policy Act of 1969, S. REP. NO. 91-296, at 8 (1969); *see also* 115 CONG. REC. 19,008 (1969) (covering the consideration of a bill amending the National Environmental Policy Act, which provides the purposes and policy goals of the Act).

45. Interview with Tom Jorling, former Minority Counsel, U.S. Senate Comm. on Pub. Works, in Provo, Utah (Feb. 11, 2019). *But see* Christopher D. Ahlers, *Origins of the Clean Air Act: A New Interpretation*, 45 ENVTL. L. 75, 77–78 (2015) (arguing that the Clean Air Act arose not necessarily because of events of 1970 but rather due to a gradual, if not inevitable, evolution of federal air regulations from 1955 to 1970; in other words, arguing that the 1970 Act does not represent "punctuated evolution," so to speak).

46. Leslie Carothers, *Upholding EPA Regulation of Greenhouse Gases: The Precautionary Principle Redux*, 41 ECOLOGY L.Q. 683, 717 (2014) ("When EPA's health-based lead regulations were undergoing final interagency review in the fall of 1973, long lines were forming at service stations as a result of the Arab oil embargo following the Yom Kippur War. . . . As EPA Deputy Administrator John Quarles recalled in his firsthand account of EPA's battle with White House staff in November 1973, one of the major lead processors ran full-page newspaper ads in the *Washington Post* and the *New York Times* claiming that the rules would waste one million barrels of oil per day. Although this wild claim was never substantiated, EPA agreed with the staff of the Office of Management and Budget to change the lead reduction schedule to reduce the first-year impacts and extend the final compliance date, while achieving a slightly greater level of total lead reduction." (footnotes omitted)); Craig N. Oren, Comment, *Struggling for Context: An Appraisal of "Struggling for Air,"* 46 ENVTL. L. REP. 10838, 10842 (2016) ("The Arab oil embargo of 1973 . . . . led to many states abandoning their ambitious goals for emission reduction" (footnote omitted)); Arnold W. Reitze, Jr., *A Century of Air Pollution Control Law: What's Worked; What's Failed; What Might Work*, 21 ENVTL. L. 1549, 1602 (1991) ("The

environment, more ecological problems, previously ignored, also became apparent.

During this initial "honeymoon era" of the environment,[47] as it would later be called by some in the Nixon White House, "pollution and ecology" enjoyed its widest base. Polling data from the period illustrate the transformation and show a degree of public support, which might seem unimaginable in a modern political atmosphere.

In May 1971, just a few months after the Clean Air Act was signed, Opinion Research Corporation's Tom Benham conducted a poll for internal use by the White House.[48] The President's adviser charged with heading up environmental policy, an environmentally-concerned Domestic Policy Council member named John Whitaker,[49] wrote a memo to Nixon that cited this poll and tried to make a case that the President should try his hand in the environmental arena.

Benham's polling clearly demonstrates the prominence of air and water pollution as an issue, being designated "very important" by seventy-nine percent of respondents—up near the top or even higher than problems of combating crime, holding down inflation, or managing unemployment.[50] Seventy-four percent of respondents said that government spending should be increased in response to air and water pollution—the second highest such rating.[51]

Even more dramatically, the polling data revealed that seventy-seven percent of the public favored closing down any factory which "continually violates laws regulating pollution, and 88% of the public similarly favored heavy fines against companies who continually violate pollution control laws."[52] A strong plurality of Americans (forty-five percent) even went so far as to insist that sources of pollution be shut down even at the expense of the jobs of "many of their neighbors."[53] Set against a background of public ignorance just a few

program to protect areas already having clean air was bogged down by EPA's failure to implement the prevention of significant deterioration (PSD) program. At the same time, unemployment had grown to nine percent, there was double digit inflation, and the nation was struggling with the aftermath of the 1973 Arab oil embargo. It was in this context that Congress, in 1977, attempted to redirect EPA toward achieving the goals of the CAA" (footnote omitted).); Memorandum from Russell Train, former Admin., Envtl. Prot. Agency, to Robert P. Mayo, former Dir., Bureau of the Budget (Apr. 16, 1970) (on file with authors as Nixon 6-221) ("Serious students of the environmental movement agree that the Santa Barbara oil spill was the single incident that crystallized the amorphous concern for the environment into an international movement.").

47. EDMUND S. MUSKIE, 92D CONG., REPORT ON S. SUBCOMM. ON AIR AND WATER POLLUTION ACTIVITY (1972) (on file with authors as Muskie 3-7).

48. Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to President Richard Nixon (June 29, 1971) (on file with authors as Nixon 2-70) (including polling data from Benham poll).

49. Whitaker's role in the Nixon-environment push in general is difficult to overstate, although tangential to the topic at hand and perhaps better left to other research reports.

50. Memorandum from Thomas W. Benham, former Executive Vice President, Opinion Research Corporation, to John C. Whitaker (June 22, 1971) (on file with authors as Nixon 2-72).

51. Memorandum from John C. Whitaker, *supra* note 48 (including polling data from Benham's poll).

52. *Id.* at 3.

53. Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to John D. Ehrlichman (July 29, 1971) (on file with authors as Nixon 2-76) (including polling data from Benham's poll).

years prior (as well as partisan antipathy in the coming years),[54] these polling figures were and remain today dramatic.[55]

The broad appeal and political one-sidedness during this period thus illuminate Gene McCarthy's characterization of clean air and the environment as an issue "that's better than motherhood."[56] But Nixon had an additional reason to worry about pollution, one that is often cited by historians of the environmental movement—Senator Edmund Muskie of Maine—who was in significant part responsible for much of Congress' early environmental enactments.[57]

As a result, Muskie surged in popularity as a potential Democratic presidential candidate when the environment began to gain traction.[58] As support for Muskie grew, so did Nixon's interest in the environment reflexively.[59] Muskie had earned the reputation as the Senate's "Mr. Clean"[60] and, unlike the rigid "law and order" Nixon who presented himself as the political establishment's response to insurgent counter-culture movements, Muskie could appeal to a disillusioned youth that formed a key voting constituency. Muskie was also later crucial in forcing "a commitment from the Nixon Administration that the Environmental Protection Agency would be an advocate, not an adjudicator, of environmental protection."[61]

In the last half of 1969, even as Senator Gaylord Nelson announced he would hold an Earth Day rally the following April (which would draw in nearly one in ten Americans), Nixon prepared to make a move of his own in 1970—an

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54. See Leon G. Billings, former Staff Dir., U.S. Senate Env't Subcomm., Keynote Address at the 75th Annual Meeting of the Missouri Water Environment Association (Mar. 22, 2004), http://www.muskiefoundation.org/leon.missouri.html (noting the way in which the partisan divide on the environment grew in the years following the passage of the Clean Air Act).

55. *See* Memorandum from John C. Whitaker, *supra* note 48.

56. Memorandum from Leon Billings *supra* note 1, at 1 (undated) (on file with authors as Muskie 1-15); Memorandum to Files, Violation of Title II of the Clean Air Act (Nov. 13, 1972) (on file with authors as Muskie 1-51). A shift on the environment can also be demonstrated by shifting attitudes within the Administration on the enforcement of existing air legislation:

> In September of 1969, the Administration entered into a consent decree to settle a civil anti-trust [sic] suit against the auto companies for conspiring for more than a decade to thwart development of pollution control devices. During consideration of that suit, the Justice Department prepared a memo recommending criminal prosecution of auto executives for collusive efforts to thwart development of clean engine systems from 1953 through the late sixties.

Id.

57. FLIPPEN, *supra* note 16, at 26–27; LAZARUS, *supra* note 8, at 76–78; John P. Dwyer, *The Pathology of Symbolic Legislation*, 17 ECOLOGY L.Q. 233, 242 (1990); Gottlieb *supra* note 20, at 302 (2009); Interview with Leon Billings, former Staff Dir., U.S. Senate Environment Subcomm., in Washington, D.C. (July 22, 2012) (on file with authors as Leon Billings D.C. Interview).

58. Louis Harris, *Muskie Leads Nixon for '72*, WASH. POST, Dec. 13, 1970 (on file with authors as Muskie 4-48); *Muskie Leads Kennedy in '72 Presidential Poll*, BOS. GLOBE, June 11, 1970, at 3 (on file with authors as Muskie 4-3).

59. 1 HOWARD H. BAKER, JR., UNIV. TENN., CTR. FOR PUB. POL'Y, CLEANING AMERICA'S AIR: PROGRESS AND CHALLENGES 14 (David C. Brill ed., 2005).

60. THEO LIPPMAN, JR. & DONALD C. HANSEN, MUSKIE 119 (1971).

61. Leon G. Billings, *Why Ed Muskie Mattered*, 13 ENVTL. F. 63, 65 (1996).

aggressive call to legislate environmental protection.[62] Although Nixon did not necessarily seek to beat Muskie on the environmental front (knowing it was not feasible), he at least sought to stage a credible challenge. That Nixon and his Administration felt considerable pressure can be seen in the President's directions to his staff–namely, how he used Muskie to frame environmental initiatives.

For example, Nixon used Muskie as a reference point or sidebar for his own staff as he organized an environmental agenda and set boundaries for new policy—John Whitaker remembered being told by the President, "I want environmental cleanup, but not at such a cost-benefit ratio that's going to hurt the economy. Don't try to 'out-clean' Mr. Muskie; there's no way you can do it."[63] Elsewhere Whitaker noted that "[Nixon] wanted a position between the liberal Muskie-dominated Senate Public Works and the conservative Cramer-dominated House Public Works Committee."[64] Nixon's position might also be characterized by staff member Christopher DeMuth's recollection of Nixon's disclaimer that "I'm not going to go as far as Muskie. Muskie would close down all of American [industry]. I won't do that."[65]

Despite reservations and insistence that he would not go as far as Muskie, Nixon made a hard push to gain green ground. On the first day of 1970, he signed the National Environmental Policy Act and, in his accompanying statement, proclaimed the 1970s to be the decade of the environment.[66] Later that year, he dedicated a significant part of his State of the Union Address to call for

62. *See* THE PRESIDENT'S MESSAGE TO THE CONGRESS RECOMMENDING A 37-POINT ADMINISTRATIVE AND LEGISLATIVE PROGRAM (Feb. 10, 1970), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1498–1511 (1974); Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to Christopher DeMuth, Staff Assistant to the President (Dec. 11, 1969) (on file with authors as Nixon 2-7); Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to John Campbell (Dec. 3, 1969) (on file with authors as Nixon 2-5); Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to John D. Ehrlichman (Nov. 13, 1969) (on file with authors as Nixon 2-4); Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to President Richard Nixon (Nov. 26, 1969) (on file with authors as Nixon 3-85); *see also* S. 3466, (1970) (empowering the Secretary to propose regulations establishing nation air quality standards), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1483 (1974); SUMMARY OF CLEAN AIR ACT AMENDMENTS OF 1970 (1970) (summarizing the 1970 amendments), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1496 (1974).

63. Interview by Frederick J. Graboske & Raymond H. Geselbracht with John C. Whitaker, former Member, Domestic Policy Council, in Alexandria, VA (Dec. 30, 1987) (on file with authors as Transcribed Interviews 2-12).

64. Memorandum from John C. Whitaker, former Member, Domestic Policy Council, to President Richard Nixon's File (Apr. 1, 1970) (on file with authors as Nixon 2-117).

65. Interview by Frank Gannon, Richard Nixon Found., with Christopher DeMuth, Staff Assistant to President Richard Nixon (Apr. 27, 2010) (on file with authors as Transcribed Interviews 2-10).

66. Richard M. Nixon, former President, United States, Remarks at the Signing of the National Environmental Policy Act of 1969 (Jan. 1, 1970) (transcribed by the Richard Nixon Found.), https://www.nixonfoundation.org/2010/01/rn-in-70-the-decade-of-the-environment/.

environmental measures,[67] including a call to make "[c]lean air, clean water, [and] open spaces . . . [a] birthright of every American."[68] He also concluded, "[t]hrough our years of past carelessness we incurred a debt to nature, and now that debt is being called."[69] Nixon followed up on his high rhetoric with a more detailed proposal in a separate "Environmental Message to Congress,"[70] which was a thirty-seven point plan to tackle the environment, many of these points being more aggressive proposals to address air pollution than those found at the time in Congress.

Thus, the Nixon Administration and the Democratic Congress initiated an arms race that would last the better part of Nixon's first term to ramp up proposals, draft bills, and claim the issue[71]—creating, as a side effect, the most comprehensive and demonstrably effective environmental legislation of the modern era and, perhaps unintentionally, a new legal discipline.[72]

Just eight days after Nixon presented his environmental message to Congress in February 1970, a new rendition of the National Air Quality Standards Act of 1970, sponsored by twenty-nine Republicans and four Democrats, was introduced before the Senate, incorporating Nixon's call for the federal government to "establish nationwide air quality standards."[73] Concurrently proposed in the House by a single Republican was a bill that focused on large stationary sources, and another concurrently introduced bill (sponsored by then-House Minority Leader Gerald Ford) sought to increase regulations on cars.[74]

Although some involved in the process would later insist that the Senate was already moving in the direction of national standards,[75] the effects of Nixon's legislative proposal should not be overlooked. Congress' existing

67. Richard Nixon, former President, United States, Annual Message to the Congress on the State of the Union (Jan. 22, 1970), https://www.presidency.ucsb.edu/documents/annual-message-the-congress-the-state-the-union-2.

68. *Id.*

69. *Id.*

70. THE PRESIDENT'S MESSAGE TO THE CONGRESS RECOMMENDING A 37-POINT ADMINISTRATIVE AND LEGISLATIVE PROGRAM (Feb. 10, 1970), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1505 (1974); s*ee also* S. 3466, (1970) (empowering the Secretary to propose regulations establishing nation air quality standards), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1483 (1974); SUMMARY OF CLEAN AIR ACT AMENDMENTS OF 1970 (1970) (summarizing the 1970 amendments), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1496 (1974).

71. LAZARUS, *supra* note 8, at 76 (referring to the Clean Air Act as a "struggle between Nixon and Muskie"); Vogel, *supra* note 20, at 57 (1987) (discussing the "bidding war" that resulted in the Clean Air Act).

72. *See supra* notes 6–7 and accompanying text.

73. THE PRESIDENT'S MESSAGE TO THE CONGRESS RECOMMENDING A 37-POINT ADMINISTRATIVE AND LEGISLATIVE PROGRAM (Feb. 10, 1970), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1505 (1974); s*ee also* S. 3466, (1970) (empowering the Secretary to propose regulations establishing nation air quality standards), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1483 (1974).

74. H.R. 16033, 91st Cong. (1970) (introduced in the House, Feb. 18, 1970).

75. *See Air Pollution Amendments: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 20 (May 6, 1970) [hereinafter *Public Works Hearings*].

momentum on air pollution, carried over from 1967, which had previously focused exclusively on expanding the regulatory range of Title II to cover noise pollution and jets, among other things,[76] was thus redirected towards remaking the Clean Air Act on a more fundamental level by Nixon's entry into the arena. Nationwide standards were the catalyst for a fundamentally different Clean Air Act. In the coming months, however, Congress would be digging far deeper than Nixon's call for nationwide standards.

And so, in March 1970, one month after Nixon's address, the Senate looked to up the ante again by introducing new efforts to amend the entire Clean Air Act, now recognizing the "limited" objectives of the 1967 Air Quality Act;[77] it additionally raised the rhetorical stakes by asserting that "the fight against pollution is not just a matter of cleaning up the environment but a necessity for man's survival," leveraging the polemic that the executive had failed to meet Congress' efforts in air pollution legislation under previous law.[78]

II. SENATE AIR AND WATER POLLUTION SUBCOMMITTEE

It was in this climate that Congress set out to capitalize on the opportunity by passing the 1970 Clean Air Act and thereby demonstrate its sensitivity to the public will.[79] Even in the context of Nixon's public statements and the House's pressure to implement national standards, the Clean Air Act evolved considerably in the Senate and was in large part defined by the Senate Subcommittee on Air and Water Pollution ("the Subcommittee"). In order to describe the coming-to-be of the Senate bill, in Subpart II.A, we consider the players in the room when the Subcommittee shaped the Clean Air Act. After introducing the Committee, we move on to highlight some players of particular importance in shaping the Act. In Subpart II.B, we consider Senator Ed Muskie, the primary player in Congress who influenced the substance of the Clean Air Act. In Subpart II.C, we discuss two other members of the Committee, Senators Howard Baker and Thomas Eagleton. Finally, we outline in Subpart II.D how Leon Billings and Tom Jorling, Senate staff members, played a key (and often diminished)[80] role in making and strengthening the Act.

76. Introduction of Air Quality Improvement Act, S. 3229, 91st Cong. (1969), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1533 (1974).

77. SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM. (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 124 (1974).

78. Introduction of National Air Quality Standards Act of 1970, S. 3546, 91st Cong. (1970), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1470 (1974).

79. William Steif, *Nader's Raiders Take on Muskie*, SCRIPPS-HOWARD (May 13, 1970) (on file with authors as Muskie 1-34).

80. This is not to say that the role of staffers Leon Billings and Tom Jorling has been entirely ignored; *see infra* note 213.

A. THE SUBCOMMITTEE

The more Nixon-aligned House moved quickly on all of the air pollution suggestions found in Nixon's thirty-seven point proposal on the environment. Many of these proposals were rolled into a single bill that was introduced on April 27, 1970,[81] and it was passed out of the House about a month later.[82] The bill then moved to the Air and Water Pollution Subcommittee of the Senate Public Works Committee. The Subcommittee acted as the primary, largely independent, vessel for the Act, as it argued over and crafted a bill with little influence from organized lobbies, staff would argue.[83] While some of the innovations of the Clean Air Act made their way into the legislation as a result of efforts or points made by the Nixon or House, in large part what made the Clean Air Act so different from its antecedents came into the bill during the Subcommittee's deliberations—setting air quality and emission limitations based solely on public health criteria, a strong but balanced federal role,[84] enforceable statutory deadlines and standards (what became known together as "technology forcing"),[85] and a provision for citizen suits.

Subcommittee deliberations took place in the ironically smoke-saturated, mid-sized Public Works Committee conference room, number 4200, in the New Senate Office building, also known as the Dirksen.[86] These meetings were out of the public eye and off record, though stenographic notes were taken—a number of which, but not all, still survive.

Who sat around the table? Unfortunately, but typical for the time, all Subcommittee members and staff were white men. Also, an ironic note worth making when considering clean air legislation, every member of the Subcommittee and staff, except one, smoked: some puffed at cigars, others worked through packs of cigarettes as they discussed public health standards and air quality indices.[87] Windows in the conference room remained closed,[88] and so one can easily imagine the rising, trapped smoke filtering upwards past the chandelier and meeting the wood-paneled walls and ceiling.

The Subcommittee worked near the Foreign Relations hearing and conference rooms, a hotspot of crucial congressional action as the Vietnam War

81. H.R. 17255, 91st Cong. (1970) (introduced in the House, Apr. 27, 1970).

82. *Id.* (reported in the House, June 3, 1970).

83. Interview by Brien Williams with Leon Billings, former Staff Dir., U.S. Senate Env't Subcomm., in Washington, D.C. (Nov. 17, 2008), https://digitalcommons.bowdoin.edu/mitchelloralhistory/194/ ("[I]t was an era in which ten or eleven men . . . sat around in a closed room and talk about what public policy ought to be, without the influence of lobbyists and damn little influence of staff.").

84. Kramer, *supra* note 8, at 48 ("The federal role in the enforcement aspect of air pollution control has been changed dramatically by the 1970 Amendments. Federal participation in what will be called a supervisory or approval role, is basically a new addition to the regulatory scheme. This supervisory role encompasses the federal government's newly appointed powers to approve, disapprove, and promulgate state regulations and variances dealing with the air pollution abatement program.").

85. Gerard & Lave, *supra* note 21, at 763.

86. Interview with Tom Jorling, *supra* note 37.

87. *Id.*

88. *Id.*

intensified.[89] Due to the throngs of anti-Vietnam student-protesters in Washington, the halls were crowded and would frequently ring with anti-war chants when members of Congress were present, generally smelling not only of tobacco from the conference rooms but also of demonstrators' marijuana smoke.[90] Somehow, surrounded by the haze of their own smoke and tucked away from a progressive youth movement, this demonstrably homogenous and institutionalist collection of legislators, embodying uncontested privilege in America, worked out the fundamental piece of U.S. Code which would make significant progress in cleaning the air and protecting millions of Americans' health and well-being.

Members and staff sat around the oblong conference table at the center of the room, ranked by seniority. Acoustics were poor, so everyone present had to speak up.[91] Jennings Randolph, chair of the full Committee and *ex officio* member of the Subcommittee, often occupied the head of the table and acted as a sort of mediator, known as being "characteristically moderate."[92] In his absence, Subcommittee Chair Ed Muskie took the head seat.[93] Left of Muskie sat Muskie's staff director and the-first full-time staff member of the Subcommittee, Leon Billings of Montana.[94] Although just a staff member, his influence is matched with his prominent seat at the table—he had Muskie's ear and generally stood between the Subcommittee and the language of the bills.[95] Left of Billings sat the majority Democrats, Thomas F. Eagleton, Birch Bayh, Joseph M. Montoya, and William Spong.[96] Sitting opposite the Democrats were minority Republicans Caleb Boggs, John Sherman Cooper, Howard Baker, Bob Dole, and counsel Thomas Jorling.[97]

Although it should be acknowledged that every member of the Subcommittee entered into the discussion and participated in the process (a point the Subcommittee itself was wont to acknowledge),[98] of those at the table, Muskie and Eagleton from the majority, Cooper and Baker of the minority, and staff members Billings and Jorling exerted notable influence on the Clean Air Act. We discuss the roles of each of these in turn.

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89. *Id.*

90. *Id.*

91. *See A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the S. Comm. on Pub. Works*, Exec. Sess. 6 (Aug. 27, 1970) [hereinafter *Public Works Hearings*] (offering an example of a comment concerning the acoustics).

92. *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the Subcomm. on Air & Water Pollution*, Exec. Sess. 50 (Aug. 19, 1970) [hereinafter *Air & Water Pollution Hearings*] (statement of Sen. Howard Baker).

93. Interview with Tom Jorling, *supra* note 37.

94. *Id.*

95. *See infra* Subpart II.D.

96. Interview with Tom Jorling, *supra* note 37.

97. *Id.*

98. *See A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the S. Comm. on Pub. Works*, Exec. Sess. 491 (Sept. 11, 1970) (statement of Sen. John Sherman Cooper).

B. SENATOR ED MUSKIE

Senator Ed Muskie warrants first consideration. A testament to his role, the Clean Air Act was, at times, called the "Muskie Bill" by frustrated White House staff.[99] Staffer Leon Billings later argued that the Clean Air Act was Muskie's "outstanding achievement."[100] In the Senate Subcommittee, Muskie offered two discrete policy contributions to the Clean Air Act that largely justify these sweeping characterizations—both of which grew out of lessons Muskie took from earlier versions of the Act and that we detail in this Subpart: a focus on public health, rather than a technical or economic feasibility, and an evolved take on shared federalism (the product of Muskie coming to terms with, although modifying, the momentum for national standards generated by Nixon's thirty-seven points).

To be clear, Muskie did not always see himself as an environment-oriented legislator.[101] When first elected to the U.S. Senate, his priority was to make a name for himself by bringing economic development to his generally rural constituency in Maine.[102] Despite being a hunter and fisherman, Muskie's transition to matters of environmental conservation was something of a byproduct of political happenstance, rather than personal background or values.[103] Muskie was punished and exiled by being assigned to the Senate Public Works Committee, a result of sparring with Southern-dominated Democratic seniority, including Majority Leader and future-President Lyndon B. Johnson.[104]

At the time, public infrastructure, mainly upkeep of federal buildings, was front and center for the Public Works Committee.[105] This committee, along with the Government Operation's Intergovernmental Relations' Subcommittee and the Banking, Housing, and Urban Affairs' Housing Subcommittee, were considered by most as "secondary" committees[106]—the sort of places Johnson would send senators "with a penchant for independence and an inclination toward liberal activism" in order to isolate them and maintain a more conservative party core.[107] To the extent that Johnson wanted to punish Muskie, he succeeded, at least at first. Muskie's initial reaction to his assignment to Public Works and the Air and Water Subcommittee was one of

99. Memorandum from Dwight L. Chapin, Deputy Assistant to President Richard Nixon, to H.R. Haldeman, Chief of Staff, White House (Dec. 28, 1970) (on file with authors as Nixon 1-48).

100. Billings, *supra* note 61.

101. *See* Blohmquist, *supra* note 20, at 1–17; Interview with Leon Billings, *supra* note 57.

102. *See* Interview with Leon Billings, *supra* note 57.

103. *Id.*

104. Blohmquist, *supra* note 20, at 10–11; PAUL CHARLES MILAZZO, UNLIKELY ENVIRONMENTALISTS: CONGRESS AND CLEAN WATER, 1945–1972, at 69 (2006).

105. *See History and Recent Membership of the Committee on Environment and Public Works*, U.S. SENATE COMM. ON ENV'T & PUB. WORKS, https://www.epw.senate.gov/public/index.cfm/committee-history/ (last visited Apr. 15, 2020).

106. *See* interview with Leon Billings, *supra* note 57.

107. MILAZZO, *supra* note 104.

disappointment[108]: "Air? What the hell do I care about air coming from Maine?"[109] In fact, he was initially more interested in the Rivers and Harbors Subcommittee because, in his words, "a little pork won't do me any harm."[110]

Compounding his initial disappointment, Muskie became the first Chairman of the Air and Water Pollution Subcommittee upon its creation in 1963;[111] after all, fighting pollution brought "little political payoff" at this time.[112]

As Robert Blohmquist recognizes, Muskie faced serious obstacles in passing pollution legislation of any significance; in addition to a lack of any anti-pollution legislation of consequence,[113] he was also up against "a presidential administration which was, at best, lukewarm in its desire to protect the environment . . . a quiescent and ill-informed public . . . and a recalcitrant, self-serving assortment of American industrial firms resistant to the notion of more rigorous and costly government pollution standards."[114] His ascendancy on the environment in committee might be explained by the fact that the interests of the Committee Chairman Jennings Randolph were found in the brick-and-mortar aspect of the Committee, which essentially left an opportunistic and increasingly ambitious Muskie to run things on the environment for the Democratic side.[115] He quickly began work on various bills that laid the framework for later anti-pollution legislation, some of which has been outlined above: the Clean Air Act of 1963, the Water Quality Act of 1965, the Air Quality Act of 1967, and even the National Environmental Policy Act of 1969.[116]

Regardless of his initial motivation, Muskie had adopted a more ostensibly "environmental" outlook by 1967. During the Clean Air Act legislation process, he employed the parlance of the emerging ecological sciences, referring multiple times to "ecological systems"[117] and the effects of dirty air on "soils, water, vegetation . . . animals, wildlife . . . [and] climate."[118] Consideration of these non-human elements was central in Muskie's provisions of pollutant criteria as

108. Blohmquist, *supra* note 20, at 10.

109. MILAZZO, *supra* note 104, at 70.

110. Blohmquist, *supra* note 20, at 11 n.38.

111. FORSWALL & HIGGINS, *supra* note 24.

112. Goldstein, *supra* note 20, at 227; LIPPMAN & HANSEN, *supra* note 60, at 143.

113. DAVID NEVIN, MUSKIE OF MAINE 184 (1972).

114. Blohmquist, *supra* note 20, at 17.

115. *Russell E. Train: Oral History Interview*, U.S. ENVTL. PROTECTION AGENCY, https://archive.epa.gov/epa/aboutepa/russell-e-train-oral-history-interview.html (last updated Sept. 8, 2016).

116. Although Senate Bill 1075, the basis for NEPA's policy statement and the bulk of its text, was the product of Senator Jackson's Interior and Insular Affairs Committee, Muskie and the Public Works Committee's Senate Bill 7, as well as competitions between the committees, had a significant impact on the National Environmental Policy Act that will be explored in future research. For existing literature that touches on this topic, see Sam Kalen, *Ecology Comes of Age: NEPA's Lost Mandate,* 21 DUKE ENVTL. L. & POL'Y F. 113 (2010).

117. *Air Pollution Amendments: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 20 (July 16, 1970) [hereinafter *Public Works Hearings*] (statement of Sen. Edmund Muskie).

118. *Air & Water Pollution Hearings*, *supra* note 92, at 5 (statement of Sen. Edmund Muskie).

they existed prior to 1970, and were incorporated into the enactment as secondary standards during conference deliberations of the 1970 Act.[119]

The 1970 Clean Air Act's public health (or rather, "health of persons") focus is thus both an extension of patterns exhibited by earlier legislation and a lesson learned by the lukewarm effect of Muskie's previous clean air efforts. While maintaining a focus on health, Muskie and his Committee now recognized that there could no longer be equivocation concerning standards and deadlines, nor could they seek only to employ "available" technologies.[120] By 1970, it was clear to Muskie that the job of Congress was not to make "technological judgments" but to establish what the "public interest requires in terms of health."[121]

Previous years and legislation experience with clean air drove in a very real distrust for industry among members of the Subcommittee.[122] Its executive session stenographs are heavily populated with Muskie's urging that standards consider the effects of pollution on public health alone, without regard towards effects on industry or for industry's evaluations of what it could or could not do: in fact, to the extent he focused on industry, it was to express pessimism that it would "drag its feet" and demonstrate the same lack of urgency as in previous years,[123] continuing to be "as conservative as the devil."[124] After one meeting with CEOs from the four major American automobile manufacturers, Muskie proclaimed, "If that's the quality of American business leadership, I can understand why the Japanese are beating the hell out of us."[125]

No doubt affected by the opportunity to capitalize on the political fervor and pressure from the environmental movement, Muskie saw to it that language considering "technical feasibility" be removed from the legislation, having been present as late as December of 1969.[126] Justifying this decision before the Senate, Muskie argued that "we learned that tests of economic and technological

119. STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE, *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 194 (1974).

120. *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the S. Comm. on Pub. Works*, Exec. Sess. 274 (Sept. 10, 1970) [hereinafter *Public Works Hearings*] (statement of Sen. Edmund Muskie).

121. *Id.* at 277–78.

122. Interview with William Ruckelshaus, first Adm'r, Envtl. Protection Agency, in Seattle, Wash. 9–10 (May 24, 2011) ("They said, 'If you want another year **beyond the one extension**, you need to come back and ask us.' Muskie did not trust the automobile companies. He was very angry at them because they had told him in the previous iteration of the Clean Air Act that they would voluntarily comply and that they would come back and report to him from time to time about what they were doing. He had become convinced that **they** had lied to him and that they weren't making a good faith effort to **meet the standards**. That is the way the statute got written in such stringent terms—deadlines and percentage reductions.").

123. *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 142 (Aug. 4, 1970) [hereinafter *Air & Water Pollution Hearings*] (statement of Sen. Edmund Muskie).

124. *Public Works Hearings*, *supra* note 120, at 277–278 (statement of Sen. Edmund Muskie).

125. Interview with Leon Billings, *supra* note 57.

126. S. 3229, 91st Cong., 1st Sess. § 202(a) (Dec. 10, 1969), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1514 (1974).

feasibility applied to those standards compromise the health of our people and lead to inadequate standards."[127]

According to Muskie, to make reference to economic factors directly, in fact, would be to "dilute" the concept of the bill, which was public health exclusively.[128] "Now what may seem economically prohibitive today may with the benefit of hindsight ten years from now look like a very cheap answer that we should have insisted upon at that time if we had only known," he insisted before the Subcommittee.[129] Muskie's idea of public health was not only oriented towards the majority of the people, but also particularly sensitive or vulnerable groups. Although it would be a question left for the courts to determine how many people must be protected by the standards.[130]

Muskie established multiple times on record that the Act was intended to address the needs of the vulnerable minority[131]: "the elderly, the young, and the sick."[132] From the beginning, he urged the Subcommittee to center measurable physiological public health metrics as the primary standard.[133] It was this orientation of the bill's goals that allowed it, in conjunction with contributions offered by his Senate colleagues, to force technology to adapt to strict statutory standards. Thus, Muskie set the stage ideologically for the technology forcing function of the Clean Air Act by centering public health and disregarding technological feasibility.

A second major evolution in environmental law ushered in through the Act was the degree of federalization of regulatory authority over environmental pollution control created by delegating large segments of power to state governments (using their own boundaries to define jurisdiction) in determining how to meet his heath-based standards,[134] while simultaneously increasing federal power of review and enforcement. Responsibility for a stronger federal presence is shared between the House and Senate; section 113 of the Senate bill did much to expand the role of the EPA, and section 110(a)(3) took its final form in the conference committee, largely the product of the House conferees.[135] Muskie's stance on the issue of the role of federal versus state powers is mixed

127. SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM. (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 125 (1974).

128. *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the S. Comm. on Pub. Works*, Exec. Sess. 217–18 (Sept. 1, 1970) (statement of Sen. Edmund Muskie).

129. *Public Works Hearings*, *supra* note 91, at 80 (statement of Sen. Edmund Muskie).

130. *Air & Water Pollution Hearings*, *supra* note 92, at 8–9 (statement of Howard Baker).

131. *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before S. Comm. on Pub. Works*, Exec. Sess. 126–27 (Aug. 31, 1970) [hereinafter *Public Works Hearings*] (statement of Sen. Edmund Muskie).

132. *Air & Water Pollution Hearings*, *supra* note 92, at 9 (statement of Sen. Edmund Muskie); *see also Public Works Hearings*, *supra* note 131, at 126–127 (quoting Edmund Muskie about his intent for the Act to "have in mind groups that are especially sensitive").

133. *See Public Works Hearings*, *supra* note 75, at 15 (statement of Sen. Edmund Muskie).

134. This being in-line with Muskie's "states-first" environmental protection paradigm, as recognized by Kalen, *supra* note 116, at 128; *see also* 115 CONG. REC. 29052 (1969) ("[O]nly those measures which were designed to enhance air and water quality would be acceptable and that local and State government have the prime responsibility to implement those measures.").

135. Kramer, *supra* note 8, at 66.

and, we argue, contributed to a more balanced outcome, perhaps ironically moderating the federalizing pushes of the Administration and House.

Muskie himself was initially ideologically opposed to this transition of authority towards the federal government. Again, national standards, unlike the lion's share of what would become the Clean Air Act, actually find their origin in the Nixon Administration and more conservative House committees.[136] Although his original position going into 1970 was to carry over the regional standards approach of his earlier legislation, Muskie recognized that the logic of a health-based standard required a nationally uniform standard in order to be maximally enforceable by a federal agency—after all, to set higher standards in some regions might give the impression of prioritizing the health of those people at the expense of others.[137]

Muskie's earlier concern was based on a fear that that the House and Administration version's national ambient air quality standards provision would trend the other way and result in some compromise in terms of standard setting (e.g. setting national standards as permissive as the most conservative state would permit), and thus create a standard too low to protect the health of vulnerable persons.[138] Cooper, always the statesman, even had to confront Muskie on the issue, asking, "[w]ell, you rejected everything else Nixon wants, how about nationalizing air quality standards?"[139] In fact, two years prior, during a House-Senate Colloquium on a national environmental policy, Muskie demonstrated his aversion to national standards when he stated that that "there must be a great diversity in whatever [standards] we get at," and, most strikingly, that the Congress "ought to avoid *the straitjacket of Federal standards*."[140]

Muskie eventually conceded, however, possibly compelled by political necessity or out of competition with Nixon, that merely stimulating greater local planning and standard-setting was insufficient,[141] and that only uniform standards could create the requisite sense of urgency and eliminate the risk of

136. *See supra* Part I; *see also* Kramer, *supra* note 8, at 62 (discussing the more "'conservative' tenor" of the House).

137. STATEMENT OF DR. JOHN T. MIDDLETON, COMM'R, NAT'L AIR POLLUTION CONTROL ADMIN., HEW, AND IRWIN L. AUERBACH, SPECIAL ASSISTANT FOR LEGISLATIVE AFFAIRS, NAT'L AIR POLLUTION CONTROL ADMIN., HEW, *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1211 (1974) (Statement of Mr. Guard); *A Bill to Amend the Clean Air Act and for Other Purposes: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 52 (July 29, 1970) [hereinafter *Public Works Hearings*] (statement of Sen. Edmund Muskie).

138. *See Public Works Hearings*, *supra* note 117, at 18 (statement of Sen. Edmund Muskie).

139. Interview by Don Nicoll with Leon Billings, former Staff Dir., U.S. Senate Env't Subcomm., in Washington, D.C. (Sept. 16, 2002).

140. *Joint House-Senate Colloquium*, *supra* note 36, at 81, 44 (emphasis added); Arlen J. Large, *New Car Deadline Highlights Pollution Bill, but Other Parts Could Have Broad Impact*, WALL ST. J., Dec. 21, 1970, at 2.

141. Introduction of National Air Quality Standards Act of 1970, S. 3546, 91st Cong. (1970), *reprinted in* 2 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 1470–1474 (1974).

appearing equivocal or arbitrary on the issue of public health.[142] Thus, Muskie needed to step aside in order to federalize regulation, initially acting as a sort of barrier.

However, once he accepted the thinking of federalizing power, he further worked to strengthen the role of the federal government and the nation-wide consistency of enforcement, demanding that federal or "national muscle" be exerted in non-attaining areas below the established national standard, a move prescient of the still-forthcoming Environmental Protection Agency.[143] In fact, Muskie was never ignorant of the Act's potential to alter the landscape of American federalism; introducing the bill in Subcommittee, he acknowledged that it represented "a major extension of federal involvement in air pollution control and will require an expanded federal presence."[144]

"We learned from experience with implementation of the law that States and local cities need greater incentives and assistance to protect the health and welfare of all people,"[145] Muskie told the Senate as he presented his bill. A race to the bottom phenomenon prevented the states from shouldering pollution control by themselves.[146] Because of inadequate enforcement, he determined, "[t]he Federal presence and backup authority had to be increased."[147] His inclusion of land use and transportation control regulatory elements in conference committee also created a new field of EPA control over state plans and widened the agency's toehold in the matter of the states.[148]

Balancing national standards with state-driven implementation would allow uniform protection of public health standards by setting a "line"[149] that could not be crossed anywhere, even when economic growth would be halted,[150] and preventing some regions from slacking in order to draw economic growth,

142. *Air Pollution Amendments: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 14 (July 23, 1970) [hereinafter *Public Works Hearings*] (statement of Sen. Edmund Muskie).

143. *Air Pollution Amendments: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 28 (May 20, 1970) (statement of Sen. Edmund Muskie).

144. *See, e.g.*, *Hearings on S. 3229, S. 3466 and S. 3546 Before the Subcomm. on Air & Water Pollution of the S. Comm. on Public Works*, 91st Cong., 2d Sess., pt. 1, at 1 (1970).

145. SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM., 2 (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 124 (1974).

146. Interview with William Ruckelshaus, *supra* note 122, at 1–2 ("Among which was the basic problem **was** that the states were primary regulatory entities in the country, and they were competing so hard for the location of industry within their borders that they weren't very good regulators. . . . As you went south, it got worse. I think that is because industrialization came along later in the south than it did in the north. As you went north in the country where there is more concern about natural systems and the environment in general, the regulatory system got a little tougher, but only a little. I mean I can remember George Wallace, when he was governor of Alabama, advertising in the Indiana newspapers, '[b]ring your industry down here. It is okay with us if you pour some stuff in the river. We want jobs.'").

147. SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM., at 3 (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 124 (1974).

148. John P. Dwyer, *The Practice of Federalism Under the Clean Air Act*, 54 MD. L. REV. 1183, 1199–1205 (1995).

149. *Public Works Hearings*, *supra* note 137, at 52 (statement of Sen. Edmund Muskie).

150. *See id. at* 49 (statement of Sen. Edmund Muskie).

while still preserving some power in the states.[151] Operationally, Muskie and his colleagues settled on the idea of state implementation plans, the largest moving part of the Act and a critical evolution over the "regulatory zones" of the 1967 Air Quality Act.[152] By giving a mandate to the states to regulate sources while shifting some pressure from the states to the federal government, Congress' new framework allowed the legislation to justify more stringent standards while providing the states with some discretion about how to meet federal standards. In the event that states failed to meet set federal standards, the Act would create a non-discretionary duty for the federal government to step in and make the call instead, absolving the state of assuming political fallout.

Thus, although the Act broadened federal authority, Muskie was careful to design it so as not to create an unwieldy federal bureaucracy. In Senate debates, for example, Muskie was sure to emphasize the latent primacy of states and municipalities in enforcement.[153] Instead, the Act sought to give to states the responsibility and authority to act at first, with federal agency action reserved as a back-up in the case of state failure.[154] Muskie moderated the expansion of

151. David E. Adelman, *Environmental Federalism When Numbers Matter More than Size*, 32 UCLA J. ENVTL. L. & POL'Y 238, 256 (2014) ("The standards for new motor vehicles, which required roughly a 90 percent reduction in emissions by 1975, were the most hotly contested provisions."); Lazarus, *supra* note 38, at 324–35 (describing the Clean Air Act's numerous deadlines as ambitious if not unrealistic); *see also* Adelman, *supra*, at 293 ("The NAAQS program and its system of cooperative federalism are considered to be the cornerstone of the CAA and integral to its many successes."); Ann E. Carlson, *Iterative Federalism and Climate Change*, 103 NW. U. L. REV. 1097, 1106 (2009) ("The basic framework for controlling air pollution since the enactment of the modern CAA in 1970 is one of cooperative federalism."); Dwyer, *supra* note 148, at 1184; Richard J. Lazarus, *The Greening of America and the Graying of United States Environmental Law: Reflections on Environmental Law's First Three Decades in the United States*, 20 VA. ENVTL. L.J. 75, 77–78 (2001); Jeffrey G. Miller, *Theme and Variations in Statutory Preclusions Against Successive Environmental Enforcement Actions by EPA and Citizens, Part Two: Statutory Preclusions on EPA Enforcement*, 29 HARV. ENVTL. L. REV. 1, 10 (2005) (calling the Clean Air Act's "complicated 'cooperative federalism'" the "bedrock of its environmental programs"); Erin Ryan, *Negotiating Federalism*, 52 B.C. L. REV. 1, 31, 64 (2011) (calling the Clean Air Act a "cooperative federalism program" and explaining that in the Clean Air Act "Congress allocates rulemaking authority to a federal agency but invites the states to implement and enforce those rules"). How much cooperation is part of the Clean Air Act's cooperative federalism scheme though is a matter of debate. *See* Train v. Nat. Res. Def. Council, 421 U.S. 60, 64 (1975) (describing the Clean Air Act's cooperative federalism as "taking a stick to the States"); Robert L. Glicksman, *From Cooperative to Inoperative Federalism: The Perverse Mutation of Environmental Law and Policy*, 41 WAKE FOREST L. REV. 719, 754–55 (2006) (arguing cooperative federalism serves as a "constraint on the capacity of either level of government to take effective steps to protect the environment").

152. *See generally* Arnold W. Reitze, Jr., *Air Quality Protection Using State Implementation Plans—Thirty-Seven Years of Increasing Complexity*, 15 VILL. ENVTL. L.J. 209 (2004).

153. 116 CONG. REC. 42,385 (1970). Muskie had maintained this position of relative state primacy since 1963. *See* Edmund S. Muskie, *The Role of the Federal Government in Air Pollution Control*, 10 ARIZ. L. REV. 17, 18 (1968) ("The philosophy of the Clean Air Act of 1963 was to encourage state, regional and local programs to control and abate pollution, while spelling out the authority of the national government to step into interstate situations with effective enforcement authority.").

154. *Air & Water Pollution Hearings*, *supra* note 92, at 26–27 (statement of Sen. Edmund Muskie); Clean Air Act § 116, 42 U.S.C. § 7416 (2018).

federal authority and saw to a balanced vision of Clean Air Act federalism.[155] The coming EPA was intended by the Clean Air Act to assume the role of the "gorilla in the closet," as the first Administrator of the EPA, William Ruckelshaus, characterized it, who would oversee, but not commandeer, the operations of the states.[156]

It is worth noting that Muskie led the Subcommittee by working to build consensus, rather than by commanding or asserting himself unnecessarily. Howard Baker, Muskie's Republican counterpart on the Subcommittee, called him "lead ass" for his ability to sit and listen to questions and comments about potential legislation for hours until he was totally satisfied that the needs of the Subcommittee were taken into account, sometimes leaving the office at 10:00 at night with a stack of memos and returning at 5:00 in the morning with responses ready.[157] In the conference committee, however, Muskie was able to shift from patterns of compromise and instead draw the line in order to protect the integrity of the Senate bill with minimal unnecessary substantive concessions.[158]

As a final note on the importance of Senator Muskie in the development of the Act, it must be acknowledged that his political stature as a threat to Nixon placed significant pressure on the President to adopt the environment as an issue in general. After Ted Kennedy's Chappaquiddick incident ruined his chances at the Presidency, Muskie became the Democratic frontrunner to challenge Nixon in 1972.[159] Polls showed Muskie as a true threat to defeat the Republican President.[160] Despite some criticism from radicals like Ralph Nader,[161] Muskie had broad appeal to Democrats due to his strength on Civil Rights and the environment. While Muskie's campaign for the Presidency would eventually be derailed by a forged letter accusing him of racism towards French-Canadians,[162] his status as the lead challenger to Nixon gave strength to the environmental movement and motivated Republicans to back environmental initiatives.[163]

155. *See* Air Quality Act of 1967, Pub. L. No. 90-148, § 101(a)(3), 81 Stat. 485; Air Quality Act of 1967, Pub. L. No. 90-148, § 108(b), 81 Stat. 491 as amended, 42 U.S.C. § 1857c-3 (1970); *see also* 113 CONG. REC. 19174–75 (1967) (remarks of Sen. Boggs); 113 CONG. REC. 19172 (1967) (remarks of Sen. Edmund Muskie). The role of the federal government in Muskie's SIP framework may have been less clear, but it was also less commanding outright than the Administration bill. Kramer, *supra* note 8, at 60.

156. Interview with William Ruckelshaus, *supra* note 122 ("We would say to **industries**, you better deal with them or you will have to worry about the EPA coming in here and flailing around and getting you in trouble. In that sense, **the States used** us as a bogeyman or **"gorilla in the closet"** that would really harm **the polluters if they** did not come into compliance.").

157. Interview with Tom Jorling, *supra* note 37.

158. *See infra* Subpart III.A.

159. Robert Wayne Norton, *The Rhetorical Situation Is the Message: Muskie's Election Eve Television Broadcast*, 22 CENT. STS. SPEECH J. 171, 175 (1971).

160. *Nixon and Muskie Nearly Even at 43% and 42% in Gallup Poll*, N.Y. TIMES, Jan. 31, 1972, at L69.

161. Brigham Daniels, *Environmental Regulatory Nukes*, 6 UT. L. REV. 1505, 1517–18 (2013).

162. James N. Naughtin, *Muskie Denies an Ethnic Slur*, N.Y. TIMES (Feb. 27, 1972), https://www.nytimes.com/1972/02/27/archives/muskie-denies-an-ethnic-slur.html.

163. *See* Daniels, *supra* note 161, at 1517–18.

C. SENATORS BAKER AND EAGLETON

Although these contributions and the ideological framing provided by Senator Muskie established a base for the Clean Air Act, particular details of the bill were the result of participation in the legislation process by other members of the Subcommittee, particularly Senator Baker from the Republican Minority and Senator Eagleton from the Democratic Majority, as mentioned above. An issue that would come to follow strict party lines in later decades, the Clean Air Act surprisingly received robust support from Subcommittee members of both parties at its genesis. If Senator Muskie, the poster boy of the environmental movement, was an "unlikely environmentalist,"[164] then the rest of the Committee's members were even less likely environmentalists. Even if they were skilled legislators with the best of intentions, there was nothing in the past of these senators that made them likely candidates to do what they did in advancing policies to protect the environment.

What makes their contributions all the more worth understanding is that despite these Senators' odd fit for the job, they made some of the most innovative contributions to the Act, which oftentimes are wrongly credited to Senator Muskie alone. Indeed, between Senators Howard Baker and Thomas Eagleton, crucial structures of technology forcing were advanced within the Subcommittee and implemented into the Clean Air Act, in large part giving the Clean Air Act teeth. The ingredients they offered, outlined below, together minimized potentially obstructive Administrative deference and forced the hands of both the EPA and the courts for decades to come.[165]

Next to Senator Muskie, Senator Baker (R-Tennessee) is frequently credited from those involved for playing what might be seen as the most important role of any senator on the Committee in the Act's legislative process. Deep into one late executive session, for example, Senator Eagleton commented that Baker persevered on the bill "second to none, or maybe second to Muskie."[166] Baker was recalled as Muskie's "first mate and later his co-captain" on the environment,[167] and was known as a great conciliator for his ability to bring together proponents of vastly different ideologies and reach compromise.[168] After his death, a Democratic colleague memorialized Baker, saying that "Howard Baker's distinguished career as senator and statesman is a product of his unique capacity to win the confidence and trust of even those with whom he fundamentally disagreed."[169] This unique capacity became especially important while Baker worked on environmental policy on the Committee.

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164. *See generally* MILAZZO, *supra* note 104.

165. Interview with William Ruckelshaus, *supra* note 122.

166. *Public Works Hearings*, *supra* note 120, at 325 (statement of Sen. Thomas Eagleton).

167. BAKER JR., *supra* note 59, at 12.

168. *See id.* at 4.

169. Ron Elving, *Howard Baker's Legacy: Political, but Not Partisan*, NPR (June 26, 2014, 5:33 PM), https://www.npr.org/sections/itsallpolitics/2014/06/26/325920335/howard-bakers-legacy-political-but-not-

Despite any complaints of industry to the contrary, Baker, a "technological cornucopian,"[170] strongly believed in American industry's capacity to adapt and overcome technological challenges.[171] The term "technology forcing" was first coined by the courts,[172] partially in reference to Senator Eagleton's words in Subcommittee executive session,[173] to refer to the Clean Air Act's provision "to require stationary sources of air pollution to comply with regulatory standards or shut down, even if the state's emission control requirements are economically or technically impossible to achieve," thus seeking to "induce technical innovation."[174]

Technology forcing is both a complement to and a consequence of commitment to Muskie's public health focus. "The health of people is more important," the Senate report reads, "than the question of whether the early achievement of ambient air quality standards protective of health is technically feasible. . . . Therefore, the Committee determined that existing sources of pollutants either should meet the standard of the law or be closed down."[175]

In committee, Baker frequently and aggressively pushed the issue of using public policy to force technological evolution. On one occasion in executive session, for example, Billings expressed what seemed to be an ostensible display of doubt regarding the practicality of the forcing concept being pursued by the Committee, to which Baker responded "Leon, you are a gentle advocate, and what you are trying to do is to lead into saying that this isn't practical, but it is."[176]

The auto industry saw the possibility of avoiding heavy investment into cleaner cars on the basis of economic and technological infeasibility, and discussions with industry representatives became frustrating for members of the Subcommittee;[177] thus, as conflict between Committee members and industry representatives grew more common, the distaste held by the Senators towards the auto industry grew. One example of this comes from a particularly intense

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partisan. Baker's bipartisan ethics carried translated into the actions of the other members of the Committee: "Prejudices and priorities, interests and constituencies were laid on the table, often bluntly, frequently with humor. And in our committee, we always made decisions by consensus." Howard Baker, Ambassador to Japan, Cleaning America's Air—Progress and Challenges (Mar. 9, 2005), http://www.muskiefoundation.org/baker.030905.html.

170. Interview with Tom Jorling, *supra* note 37.

171. Baker, *supra* note 169.

172. Union Elec. Co. v. EPA, 427 U.S. 246, 258 (1976). The term "technology-forcing" first appeared in cases and commentaries in 1975; *see*, *e.g.*, Train v. Nat. Res. Def. Council, 421 U.S. 60, 91 (1975); John Bonine, *The Evolution of "Technology-Forcing" in the Clean Air Act,* Env't Rep. (BNA), Monograph No. 21, 1975.

173. *Public Works Hearings*, *supra* note 142, at 11–12 (statement of Sen. Thomas Eagleton).

174. *Forcing Technology: The Clean Air Act Experience*, 88 Yale L.J. 1713, 1713–14 (1979).

175. 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 402–03 (1974), *quoted in* MELNICK, *supra* note 16, at 213 (alteration in original).

176. *Air Pollution Amendments: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, Exec. Sess. 30 (July 20, 1970) (statement of Sen. Howard Baker).

177. Leon Billings, former Staff Dir., U.S. Senate Env't Subcomm., & Thomas Jorling, former Minority Counsel, U.S. Senate Comm. On Pub. Works, Address at Columbia Law School (Sept. 3, 2014), https://vimeo.com/122375774.

meeting where industry representatives were attempting to convince a skeptical Committee that the technology standard pushed by the Subcommittee was not feasible for the industry to meet. Part way through the meeting, minority counsel Tom Jorling left the meeting room to use the restroom.[178]

On this occasion, he was followed by one of the technical people from General Motors. While standing next to each other at the urinal, the man confided to Jorling: "We can build whatever you tell us to build. If you tell us to build a clean car, we will build a clean car."[179] There were other instances where manila envelopes were sent anonymously to the Subcommittee with internal documents that undercut positions industry representatives had made to the Committee.[180] Interactions like these did not do any favors for the auto companies, and Baker was able to win over the Committee members, doubling down on Muskie's general skepticism, that industry could comply with the standards included in the bill. History would vindicate the technology forcing approach. As a result of the law, new emission control technologies were induced for various polluting industries, including copper smelting and electric power production.[181]

Another important contribution of Senator Baker to the Act was his unwavering efforts to push along the work of the Committee, which translated to his unwavering support of the enactment's passage. It is not hard to imagine that Senator Baker's support of the bill (as the Committee's minority ranking member) gave many other Republicans comfort—he was no Senator Muskie who aspired to unseat a GOP President. Baker's support, certainly along with the President's earlier call for clean air legislation, gave ample political cover for Republicans in Congress who wanted to support the Clean Air Act.

Another Senator, Thomas Eagleton, also bore significant influence on the Act and helped ideate policy mechanisms to translate the intentions of the Subcommittee into meaningful law. More than any other Subcommittee member, Eagleton was responsible for the many fixed statutory deadlines found in the Clean Air Act. Like his colleagues, Eagleton may have been aware of broad public cynicism concerning Congress.[182] His pitch when coming to the Committee, as later characterized and most likely caricaturized by staff member Leon Billings, demonstrates these feelings: "You know, we tell the public all this bullshit about how we are going to do something and then we never do it because we don't set deadlines. If I am going to participate in the process, we are going to set deadlines on this law."[183]

178. Interview with Tom Jorling, *supra* note 37.

179. *Id.*

180. *See id.*

181. *See* GERARD & LAVE, *supra* note 21; *Forcing Technology*, *supra* note 174, at 1719–21; Schoenbrod, *supra* note 12, at 744–45.

182. *See supra* note 45 and accompanying text.

183. Interview with Leon Billings, *supra* note 57.

The Clean Air Act operates by deadlines to force action at various levels of government;[184] a thirty-day limit on EPA to publish standards, nine months granted to the states to submit implementation plans after comment review,[185] seven months for emissions standards promulgation,[186] and so on.[187] Most importantly, an insistence for deadlines-forcing resulted in Title II's statutory 1975 deadline for a ninety percent reduction in hydrocarbons and carbon monoxide reduction and later became the bill's key source of controversy,[188] a major hang-up for both the Nixon Administration and the House conferees.[189] The Administration bill had initially set the goal of 1980, but Eagleton, Muskie, and the Committee sought an even more ambitious goal of achieving the pollution reduction goals five years earlier. Eagleton was the "initiator" of the conversation of statutory deadlines for ambient air quality standards and pushed the 1975 deadline in particular.[190]

Tasked with enforcing this stringent deadline, Russell Train, as the second Administrator of the EPA, called the decision "arbitrary."[191] And, admittedly, this criticism is not without merit. However, as Eagleton insisted, arbitrary deadlines still had the power to force action, and a firm deadline was better than a lax one to this end. Eagleton's drive to set a deadline that would create significant pressure on industry was not necessarily borne out of a belief that they would definitely achieve it, but rather out of a broader awareness that without deadlines, action would be delayed indefinitely. As he stated in executive session:

> I just felt that unless you put an identifiable goal and try to force, as it were, use the word "force," people towards that goal. If it is open-ended, God knows whenever we will get to the goal. . . . I am not saying this all won't be amended two or three or four years from now. If we don't have a date in it, in my judgment somewhere along the line it will go on into the 90's and the year 2000.[192]

Eagleton's insistence for deadlines also folded in well with Muskie's and Baker's broader goals, who stated that a deadline by statute best leverages the

184. For example, see Delaney v. EPA, 898 F.2d 687, 691 (9th Cir. 1990) ("When Congress has explicitly set an absolute deadline, congressional intent is clear. . . . The EPA cannot extract leeway from a statute that Congress explicitly intended to be strict."); *see also infra* Part IV (considering the Act as it exists today as the product of all branches of government).

185. 42 U.S.C. § 1857c-5(a)(2)(A)(i) (2018).

186. *Id.* § 1857c-6(b)(1)(B).

187. *See* Kramer, *supra* note 8, at 67–68.

188. Clean Air Amendments of 1970, Pub. L. No. 91-604, § 6(a), § 202, 84 Stat. 1690 (codified as amended at 42 U.S.C. § 7521 (2018)) ("The regulations under subsection (a) applicable to emissions of carbon monoxide and hydrocarbons from light duty vehicles and engines manufactured during or after model year 1975 shall contain standards which require a reduction of at least 90 per centum from emissions of carbon monoxide and hydrocarbons allowable under the standards under this section applicable to light duty vehicles and engines manufactured in model year 1970.").

189. *See infra* Subpart III.A.

190. *Public Works Hearings*, *supra* note 142, at 1 (statement of Sen. Edmund Muskie).

191. TRAIN, *supra* note 1, at 167.

192. *Public Works Hearings*, *supra* note 142, at 11–12 (statement of Sen. Thomas Eagleton).

ethos of Congress to communicate the "urgency of the problem, the importance of public health. . . . [T]his is the goal[;] Congress says it is."[193] Or, as Baker articulated, deadlines by statute force action and shield the decision from future political pressure: "[W]e have got to have some sort of future arbitrary date if we are going to accomplish anything and . . . we have got to relieve the Secretary of HEW" of lobbying "to have the regulations changed or a date extended, or an exception granted, and the like."[194] This recognition that such an "arbitrary date" must be soon enough so as to spur innovation was balanced against the recognition that a date set too soon carried the risk of discrediting the law.[195]

Other innovations of the Senate bill also set it apart from the House version, though the sources of these changes are harder to square with the Congressional Record. Criminal penalties and citizen suits, while not included in the House bill,[196] were integral parts of the Senate version, giving teeth to other provisions and providing incentives for the government to comply with federal mandates and polluters to comply with regulations. While the legislative record isn't entirely conclusive on the inclusion of these ideas into the bill and the circumstances in which they were incorporated, first-hand accounts from Billings and Jorling give some hints as to factors that encouraged their adoption.

The idea of citizen suits apparently originated not only outside the Committee, but also outside the Senate altogether.[197] At the time, Professor Joseph Sax (then at the University of Michigan Law School) was writing articles that pushed federal courts to provide the opportunity for citizens to litigate environmental issues, a concept tested at a smaller scale in the form of the Michigan Environmental Protection Act.[198] According to Jorling and Billings, Sax had introduced Michigan Senator Phil Hart to these ideas with hopes of them being included in some federal environmental legislation.[199] Senator Hart also happened to be Ed Muskie's closest personal friend in the Senate, giving him Muskie's ear and allowing him to ask Muskie to incorporate Sax's ideas into the 1970 Clean Air Act.[200] Although Muskie initially "hated"[201] the idea, according to Billings, he insisted that it be considered by the Subcommittee as a favor to his friend Senator Hart.[202] The staunchest supporters of the idea of citizen suits

193. *Public Works Hearings*, *supra* note 120, at 349.

194. *Public Works Hearings*, *supra* note 142, at 12 (statement of Sen. Howard Baker).

195. *Id. at* 14–16.

196. STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE*, supra* note 119.

197. Interview with Tom Jorling, *supra* note 37.

198. JOSEPH L. SAX, DEFENDING THE ENVIRONMENT: A STRATEGY FOR CITIZEN ACTION (1970); *see also* JEFFREY G. MILLER, CITIZEN SUITS: PRIVATE ENFORCEMENT OF FEDERAL POLLUTION CONTROL LAWS 4, 10 (1987); Mark Van Putten, *Making Ideas Matter: Remembering Joe Sax*, 4 MICH. J. ENVTL. & ADMIN. L. 167, 170 (2014) (crediting Sax with inventing the idea for citizen suits); Joseph L. Sax & Joseph F. DiMento, *Environmental Citizen Suits: Three Years' Experience Under The Michigan Environmental Protection Act*, 4 ECOLOGY L.Q. 1, 62 (1974) (compiling states that follow Sax's model enactment, used first in Michigan).

199. Interview with Tom Jorling, *supra* note 37; interview with Leon Billings, *supra* note 57.

200. Interview with Tom Jorling, *supra* note 45.

201. Interview with Leon Billings, *supra* note 57.

202. Interview with Tom Jorling, *supra* note 45.

on the Subcommittee, on the other hand, seem to have been Senators Eagleton and Baker.[203]

The arrival of the idea of citizen suits came at an opportune time as the members considered what to do when "the government doesn't act on a mandatory duty."[204] Thus, Hart's friendship with Muskie and the need for a check on the government led to the adoption of citizen suits as the bill's vehicle for enforcement. This sat well with Baker and Eagleton, who had been advocating for a remedy to governmental failure to comply with mandates that went beyond oversight.[205]

Finally, the legislative record gives little indication of who introduced criminal penalties to the Senate bill, but it does show that it was a point of debate and discussion.[206] While the final determination that entered the enactment set the maximum penalty for five years' imprisonment,[207] the evolution of the discussion is not altogether clear. We do find at least initial hesitation on the part of Senator Cooper, who held the position that imprisonment was never a power to be taken lightly, representing a conservative ideology that was rooted in his concern over power of the state.[208] Despite the reservations of Cooper, the penalties made it into the bill, giving the necessary teeth to the Clean Air Act to demand that it be taken seriously and marked a serious innovation by the Subcommittee.

D. STAFF CONTRIBUTIONS OF LEON BILLINGS AND THOMAS JORLING

The roles that Leon Billings and Tom Jorling played on the Committee were also significant.[209] They were not only the work engines that translated the

203. Interview with Leon Billings, *supra* note 57.

204. Interview with Tom Jorling, *supra* note 37.

205. *Id.*

206. *Public Works Hearings*, *supra* note 137, at 36–41 (statement of Sen. Edmund Muskie).

207. Clean Air Act of 1970, 42 U.S.C. § 7413(c)(1) (2018).

208. Interview with Tom Jorling, *supra* note 37.

209. The prominence of Billings and Jorling, though generally recognized by those involved, is often neglected in the literature, though there are a few notable exceptions to this characterization. *See* FLIPPEN, *supra* note 16, at 9, 113, 151, 191; MILAZZO, *supra* note 104, at 92–97, 126–133, 195–96, 241, 243; TRAIN, *supra* note 2 at 179 (recalling Leon Billings by name in conjunction with Muskie and the "close eye" they kept on "EPA and its implementation of the laws," and that they were in frequent touch). References to Leon Billings may be the defining characteristic that distinguishes a certain tier of histories of this period in environmental law of the first and second sort. *See* Transcript of Oral Argument at 40, Utility Air Regulatory Group v. EPA, 573 U.S. 302 (2014) (No. 12-1146), cited in Brief of Leon G. Billings and Thomas C. Jorling as Amici Curiae Supporting Respondents at 3, West Virginia v. EPA, U.S. Court of Appeals for the D.C. Circuit (2016) (No. 15-1363) ("Justice Breyer has cited Mr. Billings' leadership in drafting the 1970 Amendments as a valuable resource in the interpretation of the Act as it applies to stationary sources and greenhouse gas emissions."); Robert F. Blohmquist, *In Search of Themis: Toward the Meaning of the Ideal Legislator-Senator Edmund S. Muskie and the Early Development of Modern American Environmental Law, 1965–1968,* 28 WM. & MARY ENVTL. L. & POL'Y REV. 539, 606–07 (2004) (noting Billings's influence to the environmental debate); William H. Rodgers, Jr., *The Most Creative Moments in the History of Environmental Law: The Who's*, 39 WASHBURN L.J. 1, 6 (1999) ("Leon Billings and Tom Jorling, young staffers for Senator Edmund Muskie, borrowed the central premise of the Clean Water Act—no discharge—from the Refuse Act of 1899."); William H. Rodgers, Jr., *The*

Subcommittee's deliberations into concise statutory language and organized the agenda, they were also active participants at critical decision points, at times even being advocates for policy positions, generally granted considerable deference by full members of Subcommittee.[210] In other words, their contributions affected both the atmosphere of deliberation and the language of the Act itself. Other staff members, such as Minority Chief of Staff Richard B. Royce and Chief Counsel M. Barry Meyer, participated actively in discussions and should not be overlooked altogether, but Billings and Jorling stand out for their prominent role in the Subcommittee's work on the Clean Air Act and continued engagement in overseeing the Act in the coming years,[211] justifying the particular attention we pay to them in this Subpart.

Jorling and Billings had come to know each other during the 1968 election cycle, even before they began work together on the Public Works Committee.[212] Their ability to work well together was derived from their respective backgrounds; Billings believed strongly in the environmental issue,[213] and Jorling had a rare postgraduate education in ecology, then a budding scientific discipline.[214] Billings was, in his own words, "the political guy who didn't know jack shit about the environment,"[215] while Jorling was "the environmentalist who had gone to law school and had some fixed ideas on what was wrong with the public policy."[216]

Of the two staff members, perhaps due to his bombastic personality, Billings' voice was heard frequently on the Committee. Billings' stature was even noted by the popular press media of the day, which characterized him facetiously as "Senator Billings,"[217] and he similarly claimed to have garnered a

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Seven Statutory Wonders of U.S. Environmental Law: Origins and Morphology, 27 LOY. L.A. L. REV. 1009, 1014 (1994) (noting the "staff heroics" of Billings and Jorling).

210. Interview with Tom Jorling, *supra* note 37; interview with Tom Jorling, *supra* note 45.

211. In later years, the two would stand out as the primary *de facto* historians of the Committee during this crucial period of merging environmental law through visiting lectures at universities, interviews, and other speaking engagements. Unfortunately, Billings was never able to publish a complete volume of his reflections.

212. Interview with Tom Jorling, *supra* note 37; interview with Tom Jorling, *supra* note 45.

213. Memorandum from Leon Billings to File (undated) (on file with authors as Muskie 1-13, at 2) ("We are creating ecological Armageddon. We are tampering in unknown ways with elements of the biosphere, the interconnection of which we either don't know or don't understand."); *see also* Emily Yehle, *Recalling the Long, Hard Slog to a "Historic Piece of Legislation,"* E&E NEWS (Jan. 20, 2014) ("This may sound phony: I didn't do this to get my name attached to something. I did it for the outcome," Billings says today from his home in Bethany Beach, Del. "It has always been more important to me. I don't mind the recognition—I'm not being humble. In the context of what I had opportunity to accomplish, I'm very comfortable taking the credit.").

214. Interview with Tom Jorling, *supra* note 45.

215. Interview with Leon Billings, *supra* note 57.

216. Interview with Tom Jorling, *supra* note 37. The two grew closer as they commuted to work together in Billings' black F-150 taking detours to avoid riots in the protest-torn Washington. These rides served a unifying purpose, allowing for Jorling and Billings to discuss the happenings of each day and maintaining strong communication, transparency, and trust between the majority and minority factions of the Committee. *Id.*

217. Arthur J. Magida, *Clean Air Act Deliberations—the Changing of the Guard*, NATIONAL JOURNAL - ENVIRONMENT REPORT 340-41 (1976) (on file with authors as Muskie 1-10) (see, e.g., David Johnson, National Governors' Conference: "The problem was Billings. He was extremely frustrating. In his autocratic fashion, he

reputation in Detroit among the auto making industry.[218] Despite his modesty in claiming "damn little influence" on the Subcommittee,[219] Leon Billings in reality held a prominent place in the air legislation process and in the Committee generally,[220] supporting tough provisions in Committee and defending the bill against detractors,[221] like an up-and-coming Ralph Nader.[222] President Cole of General Motors told Billings over dinner that he believed he could "spit at the real cause of the auto industry's problem on clean air in Washington," implying that Billings was the "real" driver of the Clean Air Act.[223] Cole continued by "tirad[ing] against the staff for distorting the information" and accused Billings of "deliberately misinforming the members," further claiming that "not a single member of the Committee had ever read the bill nor did they understand it, indicating that [Billings] was the only person who knew the legislation at all."[224] Someone even etched into the plaster wall of a telephone booth across the hall of the Committee's offices the ominous confession "Leon Billings is God."[225]

Jorling played the important role of advising the Republican Senators on legal and ecological matters as minority counsel, and it may be difficult to overstate the degree of importance that his cross-disciplinary background had in fulfilling his responsibilities on the Committee.[226] Jorling helped the Subcommittee run smoothly and efficiently by providing important context and information regarding both the science and language of the enactment during

showed no genuine interest in the needs of the states. I don't know whether Muskie was aware of his indifference"; Larry S. Snowhite: "He's [Billing's] probably one of the most knowledgeable staff persons on the Hill. You can't bull him. But he has more rigid views than the House staff.").

218. Memorandum from Leon Billings to File 2 (on file with authors as Muskie 1-24).

219. Billings, *supra* note 61, at 63; Interview by Brien Williams with Leon Billings, *supra* note 83, at 23.

220. *See* Memorandum from John C. Whitaker, to John D. Ehrlichman (June 24, 1971) (on file with authors as Nixon 2-66) (blaming Billings for discarding the Administration Clean Water bill and supplanting it with a tougher and more expensive bill; Whitaker calls the new Senate print the "Billings bill."); *see also* interview with Russell Train (on file with authors as Transcribed Interviews 4-10) ("Leon didn't let many days go by without calling and telling you what you did wrong."); Memorandum from Leon Billings 2–3 (on file with authors as Muskie 1-24) (In 1970, when Ralph Nader attacked Muskie and his work on the 1967 Air Quality Act, it was Billings who coordinated and managed the counterattack even through Conference. In addition to "shoving it up Nader's ass," Billings also saw himself as the "bête noire" of the auto industry, subject to deep "personal animosity" from the executives of major American automakers. He engaged in verbal spats with the President of Ford Motors, Ed Cole, on one trip to Detroit, working to set the tone of the Committee's invulnerability to industry influence); Letter from Edmund Muskie, United States Senator, to Jimmy Carter, President-elect (Dec. 3, 1976) (on file with authors as Muskie 1-9) (Muskie recommends Billings for the position of EPA Administrator, telling the President that Billings "is known, and I think respected, by industry, environmentalists, state and local government officials, and many members of Congress. He is candid, aggressive, and intelligent. I doubt there is any single individual who has broader knowledge of environmental law, environmental issues and environmental politics.").

221. *See Air & Water Pollution Hearings*, *supra* note 123, at 145 (showing that Senator Muskie pushed for quicker implementation of the clean internal combustion engine).

222. *See generally* JOHN C. ESPOSITO, VANISHING AIR: THE RALPH NADER STUDY REPORT ON AIR POLLUTION (1970).

223. Memorandum from Leon Billings, *supra* note 220, at 3.

224. *Id.*

225. Interview with Leon Billings, *supra* note 57.

226. Leon Billings & Thomas Jorling, *supra* note 177.

deliberations in Subcommittee and negotiations between Senate and House conferees.[227] While this work often required long hours of tedious work poring over details, it allowed for the Senators to sort through ideas and deliberate effectively. Having come to the Committee with hesitations about working for Republicans, with whom he disagreed on some issues,[228] Jorling embraced the opportunity to achieve his bold environmental ambitions while serving the members of the Committee.

Most specifically, Billings' and Jorling's positions put them "closest to language,"[229] standing between the Senators and the bill's text, interpreting proposed language and evaluating its probable impact. They were also the point-men in the effort to take "the maze out" of the text by insisting on clear, straightforward, and mandatory language.[230] This non-discretionary nature, dominating much of the Clean Air Act, would later become crucial in forcing the hand of the EPA and the courts to enforce the Act consistently and in line with congressional intentions.[231] As Jorling remembers, the two were committed to the viewpoint that "discretion always meant either delay or non-performance."[232] Mandatory language protected the at-times-willing EPA from political backlash in making tough regulatory decisions and twisted the arm of other-times-unwilling EPA programs just the same.[233]

Ultimately, in the spirit of Muskie's aim for "national muscle," Billings insisted that "given the choice from being controversial or being weak, [the agencies] always chose weakness" and needed to be compelled rather than guided.[234] In particular, Billings petitioned the Committee to exclude from the Clean Air Act the term "significantly" and other adverbs "that tended to make it possible to argue what Congress really meant."[235] Uses of "may" were swapped by staff out for "shall" and, with little controversy or discussion, Billings and Jorling shaved off the "fuzz language" of previous bills that severely limited their meaning and worked to narrow potentially significant language like "minute" and "irreversible harm."[236] Jorling believes that this effort paid off, and

227. *Air Pollution Amend: Hearings Before the Subcomm. on Air & Water Pollution of the S. Comm. on Pub. Works*, 91st Cong., Exec. Sess. 27–31 (July 28, 1970) [hereinafter *Air & Water Pollution Hearings*] (statements of Sen. Thomas Jorling); Brief of Leon G. Billings and Thomas C. Jorling as Amici Curiae Supporting Respondents at 3, West Virginia v. EPA, U.S. Court of Appeals for the D.C. Circuit (2016) (No. 15-1363) (quoting Transcript of Oral Argument at 40, Utility Air Regulatory Group v. EPA, 573 U.S. 302 (2014) (No. 12-1146)).

228. Interview with Tom Jorling, *supra* note 37.

229. *Air & Water Pollution Hearings*, *supra* note 92, at 106 (statement of Sen. Howard Baker).

230. Interview with Leon Billings, *supra* note 57.

231. *See infra* Part IV.

232. Interview with Tom Jorling, *supra* note 37 ("Discretion always meant either delay or non-performance. So, how do you address discretion? You change it to mandatory obligation, but even if it's mandatory. We had a lot of discussions about this with Howard Baker, who was a very good lawyer. 'Let's say we charge EPA - you shall do this' and they don't do it. What's the remedy? There is no remedy, and that led to citizen suits.").

233. *See infra* Part IV.

234. Interview with Leon Billings, *supra* note 57.

235. Interview with Leon Billings, *supra* note 57.

236. *See Air & Water Pollution Hearings*, *supra* note 227, at 8–10.

that the language of the Act was sufficiently straightforward that the courts have generally interpreted the text in a way that he sees as true to the Committee's intent.[237]

III. CONFERENCE COMMITTEE AND PASSAGE

The work of the Senate Committee, however, still had to survive some scrutiny in the form of conference committee with the more Administration-sensitive and conservative House conferees before the Act was in the clear. This Part follows the story of the challenges posed to the Senate bill both by the conference process itself and in the process of securing President Nixon's signature. Although Nixon publicly called for clean air legislation and endorsed Congress' early working bills, the bill had evolved in the Senate Committee to demand much more than that which the President originally sought, and significantly more than he was comfortable with. Both stories, that of the conference committee and the signing, demonstrate a through-line of agonism between Nixon and Muskie which signified their larger political rivalry, perhaps even threatening to sink the Clean Air Act altogether.

A. CLEARING CONFERENCE COMMITTEE

The Subcommittee's bill cleared the Senate with minimal scarring from floor debates. Like the House's earlier bill, the bill passed out of the Senate with overwhelming support, garnering a unanimous vote of eighty-six to zero.[238] Because the bills from the House and the Senate were so different, a lot hung in the balance as both the Senate and the House appointed members to the conference committee, where the conferees would need to reconcile the weaker House bill, which matched well with the Nixon Administration's stated preferences,[239] with a much tougher Senate bill.

As discussed in this Subpart, a major hurdle for the conference committee became clear as pressure from the White House, mediated by the House conferees and actions of Administration officials, threatened to eliminate the Senate bill's strict one-year automotive emissions reduction deadline provision and economic cost inconsideration. The Senate conferees' effort was guided primarily by Muskie, whose uncompromising position dominated the conference outcome. Still recognizing the contributions of other Subcommittee members, Billings later remembered that Muskie "challenged his colleagues in committee, on the floor, and in conference to defend anything less than forcing technology to achieve healthy air by a date standard. None did."[240] Leon

237. Interview with Tom Jorling, *supra* note 45.

238. 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS OF 1970, at iii (1974).

239. Memorandum, General Strategy—Air Pollution Conference Committee, at 1 (undated) (on file with authors as Nixon 2-126) ("The House bill on the other hand generally follows the Administration's recommendations, and is therefore reasonably satisfactory.").

240. Billings, *supra* note 61, at 63.

Billings' recollections provide much color and insight into the conference committee process that may be otherwise absent in the available documentary history, and his characterization of the events are considered here to craft a narrative of the conference proceedings.

In contrast to his efforts to seemingly bend over backwards to create consensus on the Subcommittee, Muskie's unwillingness to compromise in the conference made him a perennial obstacle to those who wanted to change the legislation in such a way that he believed might weaken it. Illustrating the Administration's position, and demonstrating Muskie's prominent ability to shelter the bill from weakening, John Whitaker wrote during the conference process that

> The Muskie Senate version is much tougher with some real questions as to whether the automobile companies can meet the standards for automobile emissions required by the bill.
>
> . . . .
>
> The Administration [can] make no attempt to soften the Senate Bill in Conference because if we publicly oppose the bill, we will be hurt politically by being "too soft on pollution" and in Dick Cook's view, [it] won't affect the outcome anyway.[241]

The culmination of the Subcommittee's work to force technology for the public interest, the 1975 auto emissions standard in many ways became the sticking point in the conference.[242] As "[i]ndustry cried foul, . . . demanded hearings, [and] several groups suggested that the bill would put them out of business,"[243] it became the key decision of the conference.[244]

Statutory standards offered stronger congressional control and minimized the risk of administrative equivocation and weakening of the Act. With little movement happening in conference, the legislation risked being lost altogether should Congress adjourn without reconciling the different bills.[245] In fact, some within the White House had been working to slow the conference process with the House conferees in order to kill the bill and try again next year.[246] Just before midterm election day, a "flurry of activity" and concessions from the House

241. Memorandum from John C. Whitaker, Deputy Secretary to the President for Domestic Affairs, to Ken Cole, Assistant to the President for Domestic Aff. (Sept. 17, 1970) (on file with authors as Nixon 2-39).

242. Staff Reporter, *Nixon Expected to Sign Clean Air Act Today*, WALL ST. J., Dec. 31, 1970, at 9.

243. Memorandum from Leon Billings *supra* note 1, at 1 (undated) (on file with authors as Muskie 1–15).

244. SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM. (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS, 1970, at 123–28 (1974) ("One issue on which there will be repeated interpretation and misinterpretation involves the deadline for achievement of emissions standards for passenger cars.").

245. This was a conscious strategy of contrarians in the White House. Memorandum from Ken Cole, Assistant to the President for Domestic Affairs, to John Whitaker, Deputy Sec'y to the President for Domestic Affairs (Oct. 3, 1970) (on file with authors as Nixon 2-125) ("If the Congress tackled this bill after the election, we would have a little more freedom to maneuver. Of course, we may lose the bill entirely, but it's such a bad bill that it hardly seems to make any difference at this point."). *See generally* Memorandum from Leon Billings, *supra* note 56.

246. Memorandum from Ken Cole, *supra* note 245 (explaining that the Nixon Administration maneuvered to delay the bill as long as possible).

allowed the Senate to have their way on 1975 auto emissions, and the Title II standards were incorporated into the law.[247] The election itself was undoubtedly a major factor in this period of rapid gaining of ground by Muskie and his Senate cohort; any House member would be tempted by the political points in their home districts offered by credit-taking on the motherhood issue.

Once the conferees returned, however, and political pressure was alleviated by the release valve of a past election, the Senate conferees lost their momentum and "[n]o one could quite recall accepting Senate language and the job began all over again," as Billings remembered.[248] Like the more moderate House conferees, the 1975 auto emissions standard deadline was also the major hang-up of the White House, despite the urging of then-CEQ Chair and future EPA Administrator Russell Train to accept the "extremely tough" Senate bill in order to avoid any potential political backlash.[249]

Opposing Train, however, Secretary Richardson of Health, Education, and Welfare mobilized to influence House conferees,[250] attempting to cut the stronger Senate deadline and citizen suit provisions,[251] which did not exist in the House bill,[252] thus providing cover for the Administration and allowing it to set its own priorities when it came time to enforce the bill. Some controversy was generated by the publicly-released "Richardson letter," which threatened to out the White House and its attempt to curb the Clean Air Act. Richardson's efforts were, in reality, part of a larger scheme orchestrated by John Whitaker, who hoped to make any alterations to the bill privately through work with the House, thus avoiding any costly public statements by the President against the popular bill. This strategy relied on "stiffen[ing] [the] back[s]" of the House conferees, particularly when it came to standing up against the Title II deadline.[253] Possibly

247. Memorandum from Leon Billings, *supra* note 1, at 2.

248. *Id.*

249. Memorandum from Russell E. Train, Chairman, Council on Environmental Quality, to President Richard M. Nixon (Oct. 1, 1970) (on file with authors as Nixon 2-127, at 3–4) ("Columnists have noted the Administration's silence on the Senate bill. Numerous inquiries concerning the Administration's position have been made by the press. Senator Muskie has publicly requested the Administration's support and had stated that silence can only be construed as nonsupport. I would certainly not recommend that the Administration be pressured politically into supporting an unwise or irresponsible bill. However, in my judgment, neither description can be used to characterize this bill. I fear that if the Administration does not embrace this monumental piece of legislation, its credibility in the environmental field will be seriously undermined. And I also fear that it will not be clear that the basics of the legislation are the Administration's proposals.").

250. Memorandum, General Strategy—Air Pollution Conference Committee, *supra* note 239 (supporting the House version).

251. SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM., at 5 (Dec. 18, 1970), A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS, 1970, at 147 ("The conference substitute retains the Senate provision for citizen suits.").

252. STATEMENT OF THE MANAGERS ON THE PART OF THE HOUSE, at 55, A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS OF 1970, at 205 (1974) ("The House bill did not include a provision for citizen suits.").

253. Memorandum from John C. Whitaker, Deputy Secretary to the President for Domestic Affairs, to Ken Cole, Assistant to the President for Domestic Affairs 2–3 (Nov. 4, 1970) (on file with authors as Nixon 1-31) ("The political realities are such that the Muskie version will carry the day. . . . If the President proposes a compromise, although it has a slight chance of passage, he will be open to the charge from the public of being

caving to pressure from the Administration, House conferees maintained their opposition to key parts of the Senate bill.[254] Muskie was furious, not only because everyone seemed to have "lost their memory," but also because he feared it made him look foolish as he had already declared that the issue was settled.[255]

Controversy rattled the conference as Democrat John Jarman on the House side was revealed in the press to have a potential conflict of interest due to his family's owning auto dealerships in Oklahoma.[256] The process dragged on for another month, and the elephant in the room of auto emissions was put off and neglected, similar to the way it was saved for last, as it were, even during the committee process.[257] One morning session, the House appeared to finally take a definitive stand on 1975 standards, and offered their ultimatum: an amendment that would provide for unlimited extensions of the 1975 statutory standards deadline. This, they hoped, would give the auto industry room to continue business as usual without threat of total collapse, while still granting the Senate the standards in the Act itself.[258]

At this point, Muskie and the Senate conferees could have folded and acquiesced earlier arguments about keeping the extension and conditions for it as narrow as possible.[259] However, because the terms of the amendment proposed were anathema to the policy goals of the Subcommittee, the Senate conferees refused the offer and Muskie considered a compromise, ordering Senate staff to formulate alternatives to be presented in a caucus meeting during recess.[260] Billings (who also acted as a negotiator in the conference committee),[261] Jorling, and the ten other Senate staff members presented four alternatives.[262] As Billings recalled, the debate was "turgid" and conferees were tired, largely unresponsive, and confused about what the staff was proposing in terms of new technical proposals.[263]

In huddle, some Senate conferees now seemed to have been willing to accept a compromise and change their original position to a more moderate one, and each of the four proposed alternatives would have provided an additional one-year deadline extension beyond the Senate's one-year extension.[264] This

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too soft on the auto industry. . . . Muskie will probably dare the Administration to take a position and charge us with being silent. . . . I think John Ehrlichman should discuss this whole matter with the President since his mood might very easily be to simply take Muskie on with an open statement saying he is irresponsible. I say this even though I do not agree with the strategy.").

254. *See generally* Memorandum from Leon Billings, *supra* note 1, at 1–2.

255. Interview with Leon Billings, *supra* note 57, at 13.

256. *Id.*

257. *See Public Works Hearings*, *supra* note 131, at 92.

258. *See generally* Memorandum from Leon Billings, *supra* note 1, at 2–3.

259. *See generally Public Works Hearings*, *supra* note 91, at 53.

260. Memorandum from Leon Billings, *supra* note 1, at 2–3.

261. Brief of Billings and Jorling as Amici Curiae, *supra* note 227, at 2.

262. Memorandum from Leon Billings, *supra* note 1, at 2–3.

263. *Id.*

264. *Id.*

seemed to Muskie in particular, however, to provide too much leeway to the executive branch, which violated a core principle of nondelegation driving the Act's intent to strip enforcement discretion from the Act.[265]

However, Billings gave credit to Muskie alone at this critical juncture for urging the Senate conferees to maintain their original position. Faced with the additional deadline extension, Muskie insisted, by Billings' colorful characterization:

> Well, god dammit, I'm not going to go in the House and propose that we gut the goddamn bill. And I don't think anybody in this conference committee is going to go in there and tell the House that we want to gut the goddamn bill. What have you guys been doing for the last two hours?[266]

Billings also recalled Muskie as also saying concerning substantive concessions,

> I will not accept that—I will not accept a deadline extension beyond the Senate bill. The Senate has called for a deadline of 1975 and giving the automobile industry an additional year if they can prove that the [emission control technology] does not exist. Anything beyond that is unacceptable and I think the country ought to be so informed.[267]

Backs stiffened, Senate conferees rallied behind Muskie and agreed eight to zero to support their original bill.[268] Not even moderate Committee Chair Jennings Randolph, who "would have killed for that extra year," voiced opposition.[269] By one account offered by Billings, at this point an unnamed staff person turned to Muskie and said that "that killed the bill," insisting that the House would put the brakes on the whole process.[270] "[T]hen let the bill die," Muskie responded, "this is the public issue . . . this is what the public expects and this is what the public should get or there will be no bill at all."[271]

Returning to the full conference committee that same day, the Senate re-upped its adamancy and refusal to compromise as Muskie offered the compromise, which was, in Billings' words, something along the lines of "if you guys can't accept our proposition, we'll see you next year."[272] Despite its earlier

265. Interview with William Ruckelshaus, *supra* note 122 ("One of the ways of reading the **Clean Air Act** is an expression of lack of faith in the executive branch by the legislative branch. They lock you into these standards and time frames in which you must hit them. Essentially saying, 'We'll do that. Your job is to enforce what we have already done. You can grant them one year then they have to come back to us.' To me, that is a useful way to read the Clean Air Act and the Clean Water Act—an expression of a lack of trust of the executive branch by the legislative branch.").

266. Interview with Leon Billings, *supra* note 57, at 14 (quoting Sen. Edmund Muskie (internal quotation marks omitted)). Billings and others insist that Muskie was no stranger to colorful language, and so there is reason to believe that this characterization of Muskie's mannerisms may not be too far off the mark.

267. Memorandum from Leon Billings, *supra* note 1, at 3 (quoting Sen. Edmund Muskie) (internal quotations omitted).

268. Interview with Leon Billings, *supra* note 57; *see also* Memorandum from Leon Billings, *supra* note 1, at 3.

269. Interview with Leon Billings, *supra* note 57, at 14.

270. Memorandum from Leon Billings, *supra* note 1, at 3.

271. *Id.*

272. Interview with Leon Billings, *supra* note 57.

hesitancy to accept the strict statutory deadlines and standards, the House delegation voted to accept the Senate terms, later reporting to the full House that this change was the "[b]ig difference" from what they had passed earlier.[273]

The Senate, Muskie most of all, could claim victory on the core issue of the Clean Air Act, later claiming it "no less" than the Senate bill on key issues.[274] Despite equivocation from some other Senators and staff members throughout the conference process, Muskie recognized the political necessity of the rigid deadline pushed initially by Eagleton. Returning to the Senate, he emphasized this victory and seemed to take a victory lap, stating, "[t]he deadline has been retained. That deadline is January 1, 1975, for carbon monoxide and hydrocarbons, and January 1, 1976, for oxides of nitrogen. I repeat, that deadline has been retained."[275]

Interestingly, both chambers of Congress viewed Muskie and the Senate's bill in conference as "tougher," and saw the Senate conferees in the position of fending off compromises that might weaken the bill. Muskie was mentioned by name and credited with protecting the heart of the Act, even in the House. "A number of us attempted to amend H.R. 17255 to include [a statutory 1975 deadline] when it was before the House of Representatives in June of this year. We were narrowly defeated; however, Senator Muskie was successful in the Senate."[276] He is celebrated for fending off perceived attacked from industry "as espoused by the administration."[277] Similarly, he was commended "without restraint" by a co-conferee during Senate consideration.[278] Counter-intuitively, one element of the bill, which made it so "tough," was the result of the House's contributions in conference; although the Senate bill was the primary mold after which the final Act was patterned, the House contributed language increasing the role of the federal government in section 110.[279]

Other Representatives doubled down on taking the Senate's side, calling the House's efforts "inadequate—a half step where 10 giant steps were required," and recognizing the "the much stronger provisions of the Senate-passed Clean Air Act amendments."[280] The House conferees were generally lauded in their own chamber of Congress only insofar as they acquiesced and laid down to the Senate: "I want to commend the House conferees for agreeing

273. Interestingly, some in the House pushed the conferees upon their return and questioned whether the 1975 deadline would come too late. *See* HOUSE CONSIDERATION OF THE REP. OF THE CONF. COMM., at 8–9 (Dec. 18, 1970), *reprinted in* A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS, 1970, at 117–18 (1974) ("[T]his grants 5 years for allowing the automobile industry to get instruments in the automobiles which will prevent the emission of foul air. . . . [Is it] absolutely necessary to allow that long a period of time?").

274. *Id.* at 123.

275. *Id.* at 128.

276. *Id.* at 119.

277. *Id.*

278. *Id.* at 142.

279. *Compare* H.R. 15848, 91st Cong., 2d Sess. § 108(c)(1) (1970), *with* § 110(a)(3) (codified at 42 U.S.C. § 1857c-5(a)(3) (2018)).

280. HOUSE CONSIDERATION OF THE REP. OF THE CONF. COMM., at 10 (Dec. 18, 1970), *reprinted in* A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS OF 1970, at 119 (1974).

to accept the stronger Senate-passed provisions in so many cases," Representative Vanik of Ohio stated, closing the record and adding to the House chorus of praise for the Senate in general and Muskie in particular. "Their action," Vanik said, "and the action of the Congress in passing this bill will be—next to solving the dread disease of cancer—the single most important thing that the Congress can do to improve the health of the American people."[281]

With the agreement of the conferees secured and the conference committee results presented to both chambers of Congress, the bill moved next to an increasingly tense and skeptical White House. Months of anxious memos from competing factions within the White House urging the President to either accept or reject the bill were coming to a head, and Nixon's commitment to hang on to the environmental boat and stay competitive with Muskie would undergo its first major test.

B. SIGNING AND THE "MUSKIE BROUHAHA"

As 1971 grew nearer, pressure mounted, and anxiety of a potential pocket veto peaked. As questions about the fate of the bill loomed, Senator Cooper and Committee Chair James Randolph, decided to go to the White House in an effort to convince President Nixon to sign the bill.[282] While there are no official notes of what transpired between the two in their meeting, the Clean Air Act was, of course, signed. Billings believes that Cooper played an "instrumental" role in lobbying the President to get the bill signed before the end of year deadline.[283] Regardless, this episode demonstrates the persistent efforts of the Subcommittee to see the bill through.

Even before conference committee began, some within the Administration were equivocating on earlier resistance and seemed willing to accept whatever bill was presented, despite an earlier resolve to weaken it.[284] At this time, Ruckelshaus, new to his post as the first EPA Administrator, seized on the opportunity to put pressure on Nixon. In a public statement, Ruckelshaus lauded bipartisan cooperation and the results of the conference committee and expressed that he was pleased to see far-reaching proposals like those which

281. *Id.* at 120.

282. Interview with Leon Billings, *supra* note 57.

283. *Id.* ("John Sherman Cooper and James Randolph went to the White House right around Christmas and pleaded with the President to sign it. And Cooper, I think, was instrumental. I don't know what took place in that meeting. All I know is after they came back . . . the President had a signing ceremony and Muskie wasn't invited.").

284. Memorandum from John C. Whitaker, Deputy Sec'y to the President for Domestic Aff., to Ed Morgan (Jan. 7, 1971) (on file with authors as Nixon Online row 7) ("It really doesn't make a heck of a lot of difference whose legislation passes, the President's or Muskie's, as long as we are visible. Unlike revenue sharing and reorganization of the Government, we don't win or loose [*sic*] in a clear-cut fashion on this issue as long as the President will go places and do things on the environment"). Memorandum from John C. Whitaker, Deputy Sec'y to the President for Domestic Aff., to President Richard Nixon, by John Ehrlichman, Assistant to the President for Domestic Aff., at 2 (Sept. 21, 1970) (on file with authors as Nixon 1-27) (Whitaker lobbies Nixon to accept the bill publicly but recommends sending White House Congressional liaisons to lobby to weaken the bill in secret).

Nixon sent to Congress in February accepted,[285] thereby whittling away at any window of opportunity the President might have had to divorce himself from the bill and justify a pocket veto.[286]

Ruckelshaus also implicitly endorsed the citizen suit provision by discussing the role of individual citizens, and chided Congress for not working quickly enough on a water bill.[287] Russell Train, although he differed from Ruckelshaus and explicitly lobbied against the citizen suit provision, still pushed for the administration's support of the bill, insisting that it was more or less what Nixon wanted anyways, despite being "extremely tough," and holding that signing it would give Nixon some leverage against Muskie on the environment.[288] Even the Office of Management and Budget, the *de facto* rival of the Train-led environmental faction in the Nixon White House, accepted the bill over the prospect of a re-do the following year.[289] Although Nixon and many in his administrations were wont to cite the potentially deleterious effects of environmental regulation on jobs and industry, the particulars of the Act were also explicitly supported by the AFL-CIO, as well.[290]

After almost managing to avoid signing the Act by strange circumstances and a final back-stiffening, Nixon was ready to put the Clean Air Act behind him.[291] Even after deciding to sign the bill, Nixon leveraged the opportunity for political points and opted to exclude Muskie from the ceremony.[292] Staff reported that Nixon did not want Muskie "hogg[ing] the cameras,"[293] and the White House generally tried to move on from what one staffer termed the "Muskie brouhaha."[294] It is worth commenting that while it would be impossible to know Nixon's intentions at the time, he was clearly by no means anxious to get the Clean Air Act signed as soon as possible, as his previous rhetoric on the environment may have indicated. Muskie, as it turns out, was home for the

285. Press Release, Environmental Protection Agency (Dec. 17, 1970) (on file with authors as Nixon 1-193).

286. *Id.*

287. *Id.* at 2.

288. Memorandum from Russell Train, Chairman, Council on Environmental Quality, to President Richard Nixon 2 (Oct. 1, 1970) (on file with authors as Nixon 2-127).

289. Memorandum from Wilfred H. Rommel, OMB Counsel, to President Richard Nixon 5–6 (Dec. 29, 1970) (on file with authors as Nixon 1-47).

290. Letter from Am. Federation of Labor, to Jennings Randolph, Chairman, Sen. Pub. Works Comm. (Aug. 21, 1970), *reprinted in* A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS, 1970, at 715 (1974).

291. The following year in 1971, John Whitaker commented to Leon Billings that in reality, the bill had fallen and been lost behind the radiator in the Oval Office, a fact almost used to cover for a pocket veto. Interview with Leon Billings, *supra* note 57 ("Whitaker told me that the Clean Air Act had been in the President's office for him to sign and it was sitting on a radiator and it fell behind the radiator and that's why it almost was pocket vetoed.").

292. James M. Naughton, *President Signs Bill to Cut Auto Fumes 90% by 1977*, N.Y. TIMES, Jan. 1, 1971, at 1; Aldo Beckman, *Nixon Signs Clean Air Measure*, CHI. TRIB., Jan. 1, 1971, at 2.

293. Memorandum from Charles W. Colson, Special Counsel to the President, to Dwight Chapin, Special Assistant to the President (Jan. 12, 1971) (on file with authors as Nixon 1-54).

294. *Id.* (Colson refers to the controversy of whether or not to invite Muskie—Nixon didn't want to—as the "'Muskie' brouhaha"). This term is also used as a title chapter in J. BROOKS FLIPPEN, NIXON AND THE ENVIRONMENT (2000).

holidays anyway, and would have been unavailable for the signing.[295] Nonetheless, Nixon succeeded in signaling his political stance.

IV. ENFORCEMENT AND OVERSIGHT

As President Nixon signed the Clean Air Act into law at the very close of 1970, it was not altogether clear what its practical effect would be. Although the language passed by Congress was made up of largely clear and concise language, how well the Act would be administered and interpreted would make all the difference in determining whether the air would be any cleaner by the end of the "decade of the environment."

Efforts to undermine the Clean Air Act grew in the coming years as the environmental thrust dimmed and the Arab Oil Crisis flared.[296] Just four months after his hesitant signing of the Clean Air Act, Nixon sat in his office with auto executives to tell them, "I'm just telling you my personal views. . . . [V]iews are, are, are frankly, uh, whether it's the environment or pollution or Naderism or consumerism, are extremely pro-business. Uh, we are fighting, frankly, a[nd] delaying action in many instances."[297]

It is in this highly contrarian environment of the Nixon Administration that enforcement of the Clean Air Act would have to occur. The first two Administrators of the EPA, Ruckelshaus and Train, were pitted in the middle of the environmental fight as it was raging at its closest to the President. Without considering what was at risk politically, any study of EPA enforcement decisions in the 1970s lacks color and depth; thus, we hope to put the early EPA in context of an evolving political atmosphere.

Part IV.A investigates the role of the EPA's first Administrator, William Ruckelshaus, in becoming a "sheriff" and enforcer of environmental law and clean air deadlines, giving the EPA *ethos* as "the gorilla in the closet." Part IV.B follows through the service of the EPA's second Administrator, Russell Train,

295. Interview with Leon Billings, *supra* note 57.

296. *See infra* Subpart IV.B; *see also* Carothers, *supra* note 46, at 717 ("When EPA's health-based lead regulations were undergoing final interagency review in the fall of 1973, long lines were forming at service stations as a result of the Arab oil embargo following the Yom Kippur War. . . . As EPA Deputy Administrator John Quarles recalled in his firsthand account of EPA's battle with White House staff in November 1973, one of the major lead processors ran full-page newspaper ads in the *Washington Post* and the *New York Times* claiming that the rules would waste one million barrels of oil per day. Although this wild claim was never substantiated, EPA agreed with the staff of the Office of Management and Budget to change the lead reduction schedule to reduce the first-year impacts and extend the final compliance date, while achieving a slightly greater level of total lead reduction." (footnotes omitted)); Oren, *supra* note 46, at 10842 (The 1973 Arab oil embargo "led to many states abandoning their ambitious goals for emission reduction."); Reitze, Jr., *supra* note 46, at 1602 ("The program to protect areas already having clean air was bogged down by EPA's failure to implement the prevention of significant deterioration (PSD) program. At the same time, unemployment had grown to nine percent, there was double digit inflation, and the nation was struggling with the aftermath of the 1973 Arab oil embargo. It was in this context that Congress, in 1977, attempted to redirect EPA toward achieving the goals of the CAA.").

297. Unpublished recording: Conversation between former President Richard M. Nixon and John D. Ehrlichman, Lide Anthony Iacocca, and Ronald L. Ziegler, Nixon Presidential Materials Staff, Tape Subject Log 11 (Apr. 27, 1971) (on file with authors).

fresh from the Council on Environmental Quality, as he fended off Administration efforts to weaken the Act by exempting energy generation from regulation, permitting unfiltered tall stacks, and allowing significant deterioration of air quality in attaining areas. Although they offered different leadership styles, the tenure of both Administrators complemented one another and were critical in establishing a legitimate and binding Clean Air Act enforcement regime. The role of congressional oversight by key players in the Senate Public Works Committee is maintained throughout this Part, along with references to key decisions by the judiciary that affected EPA programs.

A. KEEPING THE GORILLA IN THE CLOSET: WILLIAM RUCKELSHAUS

In its first years of operation, largely due to the efforts of its first Administrator, the EPA sought a reputation of being "fair but firm."[298] This image was beneficial for Nixon, who himself publicly framed William Ruckelshaus as "a fair crusader . . . for clean air, for clean water, and a better environment for all Americans" at his swearing-in.[299] Ruckelshaus, from his first press conference as Administrator of the EPA, however, publicly leaned towards a "tough" image, using language which fostered an image as a sort of sheriff of pollution: "We see the Environmental Protection Agency's primary responsibility as enforcement. . . . [A]nd we are going after the polluters."[300] A tough stance was necessary: the EPA was battling the same public cynicism of government that had forced the strong statute through Congress in the first place, and Ruckelshaus was given the Herculean task of convincing the public that the Republican Administration could respond to the public over industry pressures.[301]

He even broke from Nixon's preferred method of discussing the environment and pollution by specifically citing industry as a serious polluter.[302] However, at the time Ruckelshaus was speaking, the EPA was armed with very little, having only been created a half-year before; furthermore, policy tools and

298. OFFICE OF ENFORCEMENT & GEN. COUNS., U.S. ENVIRONMENTAL PROTECTION AGENCY, THE FIRST TWO YEARS: A REVIEW OF EPA'S ENFORCEMENT PROGRAM 2 (1970); *see also* JOEL A. MINTZ, ENFORCEMENT AT THE EPA: HIGH STAKES AND HARD CHOICES 22 (2012).

299. President Richard M. Nixon, Remarks at the Swearing in of William D. Ruckelshaus as Administrator of the Environmental Protection Agency (Dec. 4, 1970), https://www.presidency.ucsb.edu/documents/remarks-the-swearing-william-d-ruckelshaus-administrator-the-environmental-protection.

300. Press Release, Office of the White House Press Sec'y, The White House Press Conference of William D. Ruckelshaus, Assistant Attorney Gen., and Russell E. Train, Chairman, Council on Envtl. Quality 2 (Nov. 6, 1970) (on file with authors as Nixon 1-9).

301. Interview with William Ruckelshaus, *supra* note 122, at 5, 7 ("That overall attitude and this cynicism about government that was fed by the Vietnam war **were** running so deep among so many people. . . . We had to show them that the government was in fact concerned about their health and about the environment, and that we would take action where necessary to ensure that their health was protected").

302. Press Release, Office of the White House Press Sec'y, *supra* note 300, at 5 ("[I]ndustry is one of the problems.").

staff aside, Ruckelshaus himself did not have formal management education.[303] Still, Ruckelshaus remembers being "excited and very energized" to seize on Clean Air and legitimize the new independent agency.[304]

The first step taken in translating the Clean Air Act took the form of preliminary investigation to determine the state of compliance under previous iterations of the law. Requests for emission levels at existing facilities were coupled with some stack tests and the first notices of violation of auto pollution standards.[305] The Clean Air Act provided the EPA with some of its first exercises in developing coherent national infrastructure.[306] Having been built out of the scraps of fifteen disparate agencies,[307] the new agency would have to create necessary structures to study, monitor, permit, regulate, and litigate pollution based explicitly on statutory mandate. Needless to say, the first two years of the EPA were formative and would do much to define the overall trajectory of the agency in terms of reputation, legitimacy, and organization.[308]

Legitimizing the mission of the EPA was made especially difficult by the fact that, even at the time the Clean Air Act was passed, it seemed likely that the National Ambient Air Quality Standards (NAAQS) established in Title I, in addition to the ninety percent pollution reduction standard of Title II, would be difficult, if not impossible, to meet by the set deadline of 1975 or 1976.[309] Moreover, unlike prior air and water pollution laws, the new Clean Air Act required a degree of federal coordination and regional specialization that did not yet exist.[310]

The Clean Air Act's State Implementation Plan (SIP) structure, the practical outcome of Muskie's vision of shared federalism, necessitated relationship-building with state environmental regulatory agencies, which at times pushed back against the federalization of pollution control, seeing themselves in part as defenders of regional industry productivity, while still building a federal "enforcement presence."[311] The "tough" reputation that the

303. Interview with William Ruckelshaus, *supra* note 122, at 3 ("And, I had so little management experience at the time. . . . One of our **people, named** Howard Messner, who has since died, brought in an organizational chart and said, 'Now, you move these boxes around wherever you think they ought to go.' I said, 'I have never seen an organizational chart before. How the hell would I know where these boxes go?'").

304. *Id.* at 2.

305. MINTZ, *supra* note 298, at 26 ("EPA initiated information-gathering procedures, including . . . a limited number of stack tests. The Agency issued its first formal notices of violation and administrative orders to identified sources of air pollution and began to enforce the limitations on automobile-generated pollution" (footnote omitted)).

306. Arguably, the EPA laid the groundwork for a reputation of enforcement with water regulation under the Refuse Act. *Id.* at 22. The EPA garnered publicity, for example, by concentrating efforts and holding conferences in major cities. *Id.*

307. Interview with William Ruckelshaus, *supra* note 122, at 3.

308. MINTZ, *supra* note 298, at 23 ("For many participants in EPA's newly established enforcement program, the first two years were an intensely exciting yet a hectic time. . . . The Agency's first two years were a formative time for its enforcement programs.").

309. *See* Interview with William Ruckelshaus, *supra* note 122.

310. *See* MINTZ, *supra* note 298, at 26.

311. *Id.* at 36.

EPA had worked to achieve, in addition to the comprehensive nature of the Clean Air Act and Ruckelshaus' publicized intention to enforce it, resulted in many state pollution control agencies viewing the EPA as "unnecessarily stringent and overly aggressive."[312] Even in the absence of any antagonistic relationship with the states, a lack of experience resulted in many cases in unspecific and uninformed SIP preparation, and EPA staff was forced to dedicate much of its labor and efforts to reviewing individual facilities' compliance schedules and micromanaging pollution emissions.[313]

Thus, it was necessary for Ruckelshaus to manage the development of a national regulatory framework that could execute the mandates of the Act while still fostering buy-in from the ten separate administrative sub-regions. Without such a framework laid out while the Act was still in vogue (that is, before anti-environmental tendencies became more entrenched among conservative politicians), reasonable enforcement of the Clean Air Act would have needed to come into being with much greater external political resistance; without the momentum Ruckelshaus provided by striking while the iron was still hot, a successful program would have been much less feasible.

Ruckelshaus' most outstanding decision, certainly bolstering the integrity of the Clean Air Act, was his May 1972 decision to deny the auto industry's request for a one-year extension of the 1975 auto standards on the grounds that the unavailability of the necessary technology was not sufficiently demonstrated. Despite the political pressure and efforts by industry to sway the agency, Ruckelshaus remained convinced that the deadline could be met.[314] By taking a stand on the 1975 deadlines, Ruckelshaus proved that the Clean Air Act could have real effects on industry, and that the theory of technology forcing was more than statutory postulation. The agency was going to show itself, as Ruckelshaus put it, as a true "gorilla in the closet."[315]

This is not to say, however, that the EPA, even under the leadership of Ruckelshaus, executed the newly legislated environmental will of the legislature flawlessly or without some struggle exerted by congressional oversight. Congress continually asserted its role in keeping the EPA in line, pulling on the opposite end of the rope as the conservative and incrementalistic White House. The Public Works Committee, in particular, sought to keep the EPA and its leadership close and maintain something of a working relationship; Ruckelshaus recalled Senators Muskie and Baker as being particularly responsive to his concerns and willing to co-sponsor proposed amendments.[316]

312. *Id.* at 24.

313. *Id.* at 26–27 ("Once the SIPs became enforceable, EPA devoted a good deal of its staff's time to determining how to apply these requirements to the numerous industrial and municipal sources that caused pollution. . . . The Agency also reviewed the acceptability of proposed SIP compliance schedules for many individual facilities.").

314. *See* Interview with William Ruckelshaus, *supra* note 122.

315. *Id.*

316. *Id.* ("But, from time to time, I would bring up issues to [Muskie]; he would be responsive to **them**.").

Still, the Committee was not afraid to slap the wrists of the EPA when it felt necessary; after all, the Senate was skeptical of the administration and its alleged long-term commitment to the environment. In 1971 and 1972, Ed Muskie's Air and Water Pollution Subcommittee acted as the primary vehicle for oversight and, in some instances, a rebuke of the EPA when it failed to meet Congress' lofty expectations.[317] Beginning even with the Act's passage, Muskie and Eagleton announced their intentions to be vigilant concerning the administration of the legislation, citing the administration's resistance to the Senate bill and the Richardson letter.[318]

Muskie in particular sought to ensure that the "spirit of the law" was observed, and that the EPA would not make unnecessary concessions to the auto industry or place undue costs on the consumer.[319] The Senate accused the Administration's "hesitancy to enforce the Clean Air Act" to be "abetting" the industry attack, implicating Ruckelshaus and drawing a through-line to Nixon's meetings in late 1969 to supposedly make a deal putting off auto emissions regulation and "permit dirty cars for ten years."[320] Even the arguable *magnum opus* of Ruckelshaus' Clean Air Act administration, refusing the 1975 standards deadline extension, was criticized by the Senate as being a "superficially tough stance," which was undermined or reversed by what the Subcommittee saw as unpublicized actions to the detriment of the Act.[321]

Even in the face of some Congressional rebuke, Ruckelshaus was, in the view of Train, ultimately "respected in Congress" in addition to being "well-liked by the environmental community . . . display[ing] enough independence to please the public and keep the White House a bit nervous."[322] Later scholars

317. *Implementation of the Clean Air Act Amendments of 1970—Part I, Hearings Before the Subcomm. on Air and Water Pollution of the Comm. on Pub. Works*, 92d Cong., at 224–28, 236, 243 (1972) (statement of Dr. John T. Middleton, Deputy Assistant Administrator, EPA); *see also* MINTZ, *supra* note 298, at 24 ("Along with oversight investigations of EPA's Clean Air Act implementation by Senator Edmund Muskie's Air and Water Pollution Subcommittee of the Senate Committee on Public Works, the hearings arose in the context of a general upsurge in congressional oversight of the executive branch, as well as open disparagement, by some members of Congress, of early decisions by EPA that proved politically unpopular.").

318. *See* SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM. (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR AMENDMENTS, 1970, at 138 (1974).

319. *Implementation of the Clean Air Act Amendments of 1970—Part 3 (Title II): Before the Subcomm. on Air and Water Pollution of the Comm. On Pub. Works,* 92d Cong., at 1361 (1971) (statement of Sen. Edmund Muskie, Chairman, S. Subcomm. on Air and Water Pollution of the Comm. of Public Works).

320. Memorandum to Files, Violation of Title II of the Clean Air Act, *supra* note 56 ("The Nixon Administration opposed enactment of the 1970 Clean Air Amendments, and a veto of this Congressional initiative to protect the public health was threatened. . . . The industry attack is being abetted by the Administration's hesitancy to enforce the Clean Air Act. . . . In late 1969, auto industry executives gathered for a secret meeting with the President at the White House to make a deal to permit dirty cars for ten years.").

321. *Id.* It was argued that emission control devices authorized by EPA for 1973 turn off under normal conditions, violating Title II Section 203, and EPA had failed, in the eyes of the committee, to visibly enforce it. Manufacturers provided false information knowingly, violating Section 113, without meeting serious consequences. EPA would shift catalyst replacement costs to consumers, despite good practice suggested by Ruckelshaus that costs be incorporated at the time of purchase. Taken together, these charges lead to the polemic by 1973 that "the clear intent of the Clean Air Act is not being carried out." *Id.*

322. TRAIN, *supra* note 2, at 159.

concluded that it may have been the "glare of intense publicity" which aided Ruckelshaus in kicking enforcement measures into second gear.[323]

Still, congressional oversight alone was not always enough to overcome the massive political forces weighing on the EPA, and at times, the courts were forced to intervene and mandate action in the spirit of the Committee's intentions.

Judge Malcolm Wilkey, of the D.C. Circuit Court of Appeals,[324] captured this trend in powerful language in 1976 when he asserted that "recent history would indicate that the prime mover behind implementation of the Clean Air Act has not been Congress or EPA, but the courts—specifically this court."[325] As evidence of his point, Judge Wilkey cited Ruckelshaus' own comments in justification of controversial auto emissions in which the Administrator punted responsibility for enforcement decisions to the judiciary after *NRDC v. EPA*,[326] stating, "I know this is controversial, but I am under a court order and this is the only demonstrable way to meet the national clean air standards."[327]

Ruckelshaus also recalled this pressure from the courts in the case of court-mandated transportation controls in Los Angeles, for example—although the EPA argued that it would be impossible to meet NAAQS deadlines in the area by the 1975 or 1976 deadline, the court nevertheless demanded that EPA mandate strict controls in California's implementation plan at risk of contempt.[328] When Ruckelshaus, in turn, announced EPA's intentions to remove eighty percent of automobiles from L.A. and was met with laughter from a room of reporters, he shielded the agency from criticism by citing the court's *ethos*: "It's not a joke. It is the law and a requirement from a judge."[329] It is worth considering, however, that the steel in the court's spine was likely not entirely its own. The drafters of the Senate bill discussed above deserve sustained credit, being responsible for removing excess discretion from the courts and mandating implementation of the Act's standards.

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323. MINTZ, *supra* note 298, at 23.

324. It is worth mentioning that Judge Wilkey also authored the opinion which accepted Ruckelshaus' decision to ban DDT. *See* Envtl. Def. Fund, Inc. v. EPA, 489 F.2d 1247 (D.C. Cir. 1973).

325. Ethyl Corp. v. EPA, 541 F.2d 1, 88 n.88 (D.C. Cir. 1976) (Wilkey, J., dissenting).

326. Nat. Res. Def. Council v. EPA, 475 F.2d 968, 970–71 (D.C. Cir. 1973).

327. *Ethyl Corp.*, 541 F.2d at 88 n.88 (Wilkey, J., dissenting) (quoting Karen Elliott House, *Lost in a Smog Bank*, WALL ST. J., Jan.16, 1976, at 4.

328. Interview with William Ruckelshaus, *supra* note 122 ("[W]e were sued in Los Angeles for failure to implement the Clean Air Act. . . . We said, 'We are working hard at it, but there is no way we **can** get there by the deadline' in our arguments in the courts. The judge said, 'impose transportation controls.' That is when we came up with getting 80% of the cars off the road. The judge threatened to hold me in contempt and put me in jail if I didn't impose the **transportation controls**."); *see also* Dwyer, *supra* note 148, at 1202.

329. Interview with William Ruckelshaus, *supra* note 122 ("The first question after I announced what we were doing was, 'Is this a joke?' . . . I said, 'It's not a joke. It is the law and a requirement from a judge.' I did not say this, but in my mind, the judge had been correctly reading the law. It is what it says. So, if that is what I have to do to stay out of jail, that is what I would do. I was convinced that we would get relief as a result of that. And, we did. I did let the White House know what I was doing. I wanted the White House to understand and **L.A** to understand and the Congress to understand . . . . Don't blame the judge. He stuck with the law that was in front of him.").

Another such case of judicial strengthening-through-interpretation of the Act took the form of a strong policy of antidegradation, also known as prevention of significant deterioration (PSD), which would prevent degradation of air quality conditions in areas where federal standards were already met.[330] The language of the Act itself contained no provision or mandate for the prevention of significant deterioration in attaining areas.[331] The closest it came, however, to such a policy, was the language "protect and enhance" found in the Act's declaration of purpose.[332]

This phrasing was carried over from the 1967 predecessor legislation.[333] In 1972, Muskie publicly insisted that the EPA's failure to adopt a non-degradation policy was a failure to recognize Congress' intentions since the 1967 amendments.[334] Obligated to enforce the earlier legislation, Health, Education, and Welfare (HEW) promulgated rules in 1969 that recognized "air quality standards which, even if fully implemented, would result in significant deterioration of air quality in any substantial portion of an air quality region clearly would conflict with this expressed purpose of the law."[335]

This policy was reported to the Senate Subcommittee on Air and Water Pollution and the House Committee of Public Health and Welfare,[336] and congressional intent to carry over such a policy was made rather explicit, at least by the Senate in their report accompanying the 1970 amendments: "In areas where current air pollution levels are already equal to, or better, than the air quality goals, the Secretary shall not approve any implementation plan which

330. *See generally* Prevention of Significant Deterioration of Air Quality, 42 U.S.C. §§ 7470–7492 (2018).

331. *Id.*

332. *Id.* at § 7470(2).

333. *See* Martin & Symington, *supra* note 34, at 243–44 (highlighting main purposes of 1967 amendments to the Clean Air Act); Arthur C. Stern, *Prevention of Significant Deterioration: A Critical Review*, 27 J. AIR POLLUTION CONTROL ASS'N 440, 440 (1977) ("There is approximately a ten year history of the development of the concept of 'prevention of significant deterioration' (PSD) or 'nondegradation' of clean air areas and the implementation of this concept in legislation and regulations."); Victoria Tkachenko, *Prevention of Significant Deterioration: The 1978 Regulations*, 3 HARV. ENVTL. L REV. 275, 275 (1979) ("Building on [the Clean Air Act Amendments of 1970] . . . the Clean Air Act Amendments of 1977 . . . adopted a PSD program and set up a procedure for classifying clean-air areas" (footnotes omitted)).

334. EDMUND S. MUSKIE, 92D CONG., REPORT ON S. SUBCOMM. ON AIR AND WATER POLLUTION ACTIVITY, (1972) (on file with authors as Muskie 3-7).

335. NAT'L AIR POLLUTION CONTROL ADMIN., U. S. DEPT. OF HEW [HEALTH, EDUCATION, AND WELFARE], GUIDELINES FOR THE DEV. OF AIR QUALITY STANDARDS AND IMPLEMENTATION PLANS, Part I § 1.51, at 7 (1969) (cited in Sierra Club v. Ruckelshaus, 344 F. Supp. 253, 255 (D.C. Cir. 1972)).

336. *Hearings on Air Pollution Before the Subcomm. on Air and Water Pollution of the S. Pub. Works Comm.*, 91st Cong. 132–33 (1970) (statement of Hon. Robert H. Finch, Sec'y, Dept. of Health, Educ., & Welfare) ("Accordingly, it has been and will continue to be our view that implementation plans that would permit significant deterioration in air quality in any area would be in conflict with this provision."); *Hearings on Air Pollution Control and Solid Wastes Recycling Before the Subcomm. on Pub. Health and Welfare of the H.R. Comm. on Interstate and Foreign Commerce*, 91st Cong. 280, 287 (1970) (statement of Hon. Robert H. Finch, Sec'y, Dept. of Health, Educ., & Welfare) ("It will continue to be our view that implementation plans that would permit significant deterioration of air quality in any area would be in conflict with this provision of the Act.").

does not provide, to the maximum extent practicable, for the continued maintenance of such ambient air quality."[337]

When enforcement authority was transferred over to Ruckelshaus' EPA, PSD rules were not implemented, against the wishes of the Committee,[338] and rules were set permitting states to submit plans that would allow clean air areas to be degraded, so long as the plans were merely "adequate to prevent such ambient pollution levels from exceeding such secondary standard."[339]

In *Sierra Club v. Ruckelshaus*, however, Judge Pratt of the D.C. District Court ruled that the term "protect and enhance," carried over from the 1967 amendments, not only provided EPA with justification for antidegradation, but were actually grounds for the invalidation of any SIP approval which did not conform to antidegradation standards.[340] More than a justification for such a policy, the prior rules, in conjunction with the Act's text, provided an affirmative obligation to prevent significant deterioration, according to the court.[341] The court further argued that "the public interest in this case strongly supports the legislative policy of clean air and the non-degradation of areas in which clean air exists."[342] The injunction provided against permitting SIPs, which would allow deterioration in areas of attainment, was affirmed by the Supreme Court on June 11, 1973 in a four-to-four vote without written opinion, and the EPA scrapped relevant SIPs.[343]

B. SEEING THE CLEAN AIR ACT THROUGH: RUSSELL TRAIN

After Ruckelshaus was asked by Nixon to resign from EPA in April 1973 to take the place of J. Edgar Hoover as Acting Director of FBI, Russel Train moved in from the President's Council on Environmental Quality, where he quickly found himself venturing into the increasingly "murky" political waters of environmental protection at EPA.[344] His nomination was supported even by the hard-to-please Ed Muskie, who lauded Train's "background and experience

337. S. REP. NO. 91-1196, at 2 (1970). The House report contains no such language or indication of intent for PSD. *See* H.R. REP. NO. 91-1146, at 1, 2, 5 (1970); *see also* SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM. (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 119 (1974).

338. *Hearings Before the Subcomm. on Pub. Health and the Env't of the H. Comm. on Interstate and Foreign Commerce*, 92d Cong. 351–52 (Jan. 27–28, 1972) (cited in *Ruckelshaus*, 344 F. Supp. at 254) (unpublished transcript)).

339. *Ruckelshaus*, 344 F. Supp. at 254; *see also* 40 C.F.R. § 51.12(b) (2020).

340. *Ruckelshaus*, 344 F. Supp. at 256 ("[I]t is our judgement that the Clean Air Act of 1970 is based in important part on a policy of non-degradation of existing clean air."); *see also* McNollgast, *supra* note 16, at 31 (arguing that *Sierra Club* was poorly decided because Judge Pratt misinterpreted judicial intent by failing "to honor the preferences of pivotal members of the enacting coalition, and thereby overturned their legislative agreement").

341. *Id.*

342. *Id.* at 257.

343. Sierra Club v. Ruckelshaus, 412 U.S. 541 (1973).

344. TRAIN, *supra* note 2, at 156 ("What I did not see clearly . . . was the extent to which the environmental honeymoon had come to an end and how much of a conflict between environmental and energy objectives would characterize the years immediately ahead at the EPA.").

to vigorously pursue" the job with "independence and objectivity."[345] Even bomb-thrower Leon Billings, who had arguably higher standards, spoke glowingly of Train, calling him "beyond a doubt, the most important environmental advocate in any administration in which I was involved," and the "best administrator the EPA has ever had bar none."[346]

In fact, it was none other than the Senate Public Works Committee which conducted Train's confirmation hearing, which he cleared eighty-five to zero, further showing their sustained oversight role.[347] Train's easy clearance of the Senate confirmation hearing also demonstrate his popularity in Washington. This popularity may have saved Train during more turbulent periods, in fact; a less popular Administrator may have been more expendable in the eyes of a desperate and tail-spinning President looking to reign in the executive.

When Train entered the EPA, the environment's popularity was backsliding, and the "honeymoon period" of the ecology movement was seen to have already passed by. Unlike Ruckelshaus, Train considered himself an environmentalist by the common understanding of the term.[348] Also unlike Ruckelshaus, Train would be forced to wage war uphill for the EPA. The "[A]gency's first chief, William Ruckelshaus, waged anti-pollution offensives with strong public support. Mr. Train, on the other hand, found himself defending the environmental movement and his agency against attack . . . . But Mr. Train is not giving ground easily," the *Wall Street Journal* reported.[349] An environmental reporter described the shift during Train's time in a similar way:

> Gone are the banner, slogan days, and much of the glamour that surrounded a new agency born of a popular cause. Gone too is the relatively quick and highly visible environmental offensive that produced the early wave of regulation. . . . No longer was environment the golden child, the exclusive and favorite national concern.[350]

Statutory deadlines of 1975 imposed by the Clean Air Act appeared on the horizon just in time for the zenith of an energy crisis which threatened to carry with it economic downturn in the face of trending inflation, and the White House no longer masked its intentions to roll back environmental regulations in green-tinted language. Nixon needed allies in industry as his Presidency spiraled.[351]

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345. *Id.* at 156–57 (internal quotation marks omitted) (citation omitted).

346. Interview with Leon Billings, *supra* note 57.

347. TRAIN, *supra* note 2, at 157.

348. Interview with William Ruckelshaus, *supra* note 122 ("I did not see myself as an environmentalist in the sense that I was an advocate in front of various government agencies or in society as a whole for government action on behalf of the environment. . . . I have never been part of the environmental movement and haven't thought of myself as such."); *see also* Interview by Harold K. Steen, Forest History Soc'y, with Russell E. Train, Adm'r, EPA, in Wash. D.C., 44–45 (1993), https://foresthistory.org/wp-content/uploads/2016/12/Train_Russell_E.ohi_.pdf ("One of the members of the committee, Republican Senator Scott of Virginia, asked me to explain why in my *Who's Who* biography I had listed after my name, 'environmentalist.' He said, 'Weren't you a judge in the United States Tax Court?' I said, 'Yes, sir.' He said, 'Are you ashamed to have been a judge in the U.S. Tax Court?' I said, 'No, sir.'").

349. TRAIN, *supra* note 2, at 174.

350. *Id.* at 201 (footnote omitted).

351. FLIPPEN, *supra* note 16, at 189–99.

"If the motivation for his pro-environment initiatives prior to 1973 had been largely political—with an eye on Muskie and on the 1972 election—as it probably had been, that motivation had now evaporated," Train wrote.[352] The primary assault on the Clean Air Act, among other environmental laws, was waged on the front of energy security.[353]

Soon after his swearing in, for example, Train recalls being invited by Nixon to attend a Cabinet meeting focused on the issue of a fuel shortage forecast for the coming winter.[354] Less available oil would necessitate substitutive coal burning, and Nixon indicated that he believed, being unfamiliar with the states' ability to request variances, that it would be necessary to lower the emission standards overall.[355] Train relied on the public health focus of the Clean Air Act generated by Muskie to stage his defense of the Act, pointing out the standards' relevance to "such issues as emphysema, bronchial disorders, respiratory disease generally, cardiac conditions, and lung cancer."[356] Nixon responded by noting that "when he was young there were more cases of tuberculosis from cold houses than from most other causes."[357] Immediately following the meeting, Nixon and Energy Policy Office Director John Love held a meeting to call for "a relaxation of air pollution standards."[358]

In early 1974, the Nixon White House and OMB released thirteen proposed Clean Air Act rollback amendments, which would permanently permit tall smokestacks, allow consideration of economic effects and costs in standard-setting (undoing a key aspect of technology forcing), disallow state preemption of weaker federal air standards, and exempt all energy production from the National Environmental Policy Act.

To fight back, Train met with Nixon in an attempt to explain his point of view; more significantly, he took to the press to broadcast his objections and undermine Nixon's rollback strategy. The *New York Times* reported on the issue in an article dramatically titled "White House Challenged by Environmental Chief," which quoted Train stating, "I want it known that I am strongly opposed to most of these proposals, and I am going to fight them to the last wire, because I don't think they are necessary and I do think they'd do substantial harm," even calling the proposed NEPA exemption a kind of "designed emasculation," which he "bitterly opposed."[359] Elsewhere, Train doubled down and indicated that he

352. TRAIN, *supra* note 2, at 163.

353. *Russell E. Train: Oral History Interview*, *supra* note 115 ("By then, the bloom was off the environmental rose and the name of the game was to promote energy supply. This was the Administration's viewpoint. So, almost everything was looked upon from the standpoint of whether it promoted or depleted the nation's energy supply. The fight over sulphur standards and emissions reflects this emphasis on energy.").

354. TRAIN, *supra* note 2, at 162–63.

355. *Id.* at 162.

356. *Id.*

357. *Id.*

358. *Id.* at 163.

359. *Id.* at 172.

believed he had made his opposition to many of the rollback amendments "pretty damn clear."[360]

Although Nixon's stance was less clear in 1970, by this point the *Times* openly discussed "the President's well-known opposition to important segments of the Clean Air Act when it was passed. At that time, it was said by White House sources that he came close to vetoing the bill."[361] Should the fight be litigated before Congress, the *Times* stated, Train "will have aggressive allies in Senator Edmund S. Muskie, the Maine Democrat who is chairman of the Senate subcommittee on environmental pollution, and several of his colleagues."[362]

Muskie's looming presence in the Senate, although no longer sufficient to force the hand of the White House through the threat of political competition, was nevertheless a sustained force for backing Train's EPA as the two fended off political attacks on the EPA and the Clean Air Act. Train was supported by the Senate Public Works Committee, with which Train said "it would have been impossible to have a more supportive relationship,"[363] singling out Howard Baker, Jennings Randolph, and Ed Muskie in particular, who had become a close friend of Train's.[364] Without both men, it is feasible that the Clean Air Act would have succumbed to the political vortex of the energy crisis.[365]

The proposed rollback amendments eventually sent to Congress were successfully trimmed back by Train's public adamance,[366] and Muskie publicly ceded credit to Train for "blocking some planned anti-pollution rollbacks."[367] The intentions of the Act were protected, including the EPA's commitment to permanent pollution control technology in the form of smokestack scrubbers, which would become an integral part of the implementation of the Clean Air Act for stationary sources,[368] and another example of the Act's technological forcing capabilities.[369]

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360. *Id.*

361. E.W. Kenworthy, *White House Challenged by Environmental Chief*, N.Y. TIMES, Mar. 11, 1974, at 58.

362. *Id.*

363. TRAIN, *supra* note 2, at 179.

364. Interview by Don Nicoll with Russell E. Train, former Adm'r, EPA, in Wash., D.C. (May 4, 1999); *see also* Interview with Leon Billings, *supra* note 57 ("He and Muskie got along as well as any two people I ever met. They would sit there with there [*sic*] legs crossed, smoking cigars . . . Train would tell Muskie what it was like dealing with Nixon or Ford, and what he had to do.").

365. Interview with Russell Train in Wash., D.C. (May 30, 2012).

366. TRAIN, *supra* note 2, at 173 ("What finally went to Congress represented a compromise between Bill Simon, . . . the White House, and me.").

367. *Id.*

368. *Id.* at 192 (Train was adamant that "Congress would never approve permanent intermittent controls (i.e., tall stacks).").

369. *Forcing Technology*, *supra* note 174, at 1722–25 ("Between 1972 and 1974, the feasibility of scrubbers emerged as the major issue in the struggle between the EPA and the utilities over compliance with SO_2 emission limitations. The agency confronted technical objections in extensive public hearings in 1973 and followed in 1974 with a vigorous enforcement program. Despite the early and well-publicized failures of several scrubber demonstration programs, the state and federal requirements forced relatively rapid development, demonstration, and use of workable SO_2 control technology" (footnotes omitted)).

Train would be fated to fight the same battle against energy-driven rollbacks again against Ford, who nearly resubmitted virtually the same set of rollback proposals to Congress the following October.[370] In the Ford White House, Train faced a constant battle against the Clean Air Act from others close to the President.[371] Interestingly, though, disputes with the White House were reported by the *Wall Street Journal* as "improving Mr. Train's standing with his [EPA] troops,"[372] who were generally young, enthusiastic environmentalists with ideological commitment to the mission of the agency.[373]

Train and the Muskie Subcommittee would later join forces again to oppose Utah Senator Frank Moss' proposed Administration-backed amendment to the Clean Air Act, which would have postponed promulgation of any EPA regulations pending further study.[374] By Train's evaluation, the EPA, with the assistance and perpetual presence of the Committee, never lost a major battle in the fight of energy versus the environment, despite the political forces pointed against them.[375]

Much as was the case with Ruckelshaus' tenure, the courts also influenced the administration of the Act by EPA under Train. Of primary concern during Train's time at the EPA was the issue of cost consideration, given the extenuating economic and technical circumstances of the recession and oil crisis.[376] After years of the Nixon and Ford Administrations unsuccessfully working to amend the Clean Air Act to include cost consideration in SIP review, the issue of cost considerations was brought before the courts in 1976,[377] when three coal-fired power plants in the non-attaining St. Louis area petitioned the D.C. Circuit Court for relief, alleging that compliance was impossible.[378] In

370. TRAIN, *supra* note 2, at 173–75.

371. Many of whom would become significant players in the GOP in the coming decades, such as Bill Simon, Paul McCracken, and Roy Ash.

372. TRAIN, *supra* note 2, at 174.

373. Interview by Harold K. Steen, *supra* note 348 ("They were young, enthusiastic, highly dedicated environmentalists and with sometimes an almost evangelical fervor in carrying out their jobs.").

374. TRAIN, *supra* note 2, at 211.

375. *Russell E. Train: Oral History Interview*, *supra* note 115 ("[B]y and large we were able to hold the line on all of the environmental legislation and regulations. I think this was a major accomplishment because all the political strength was really on the energy side.").

376. *See* Press Release, Office of the White House Press Sec'y, *supra* note 300.

377. We recognize that litigation concerning the feasibility provision began as early as 1972. *Union*, however, was the first such case brought before the Supreme Court, and the first significant affirmation of technology forcing as an enforceable provision of the Act. *See* Appalachian Power Co. v. EPA, 477 F.2d 495 (4th Cir. 1973) (holding that EPA must either hold feasibility hearings or defer to the State's record); Buckeye Power Inc. v. EPA, 481 F.2d 162, 169 (6th Cir. 1973) ("[T]he Agency's argument that technological infeasibility, high cost-benefit, and resource unavailability are irrelevant under the 1970 Amendments [and are] devoid of merit."); Duquesne Light Co. v. EPA, 481 F.2d 1 (3d Cir. 1973) (acknowledging that the EPA was prevented from imposing plans under state plans that were implementing clean air programs); St. Joe Minerals Corp. v. EPA, 508 F.2d 743 (3d Cir. 1975) (maintaining that the EPA could not approve infeasible SIP regulations); *see also* MELNICK, *supra* note 16, at 213–15 (1983) ("[C]ourts have consistently maintained that the EPA must at some stage in the administrative process consider the feasibility of control measures needed to meet SIP requirements.").

378. Union Elec. Co. v. EPA, 427 U.S. 246 (1976).

response, the court held that "claims of economic and technological infeasibility could not properly provide a basis for the Administrator's rejecting a plan."[379]

Taken to the Supreme Court, the petitioners from St. Louis similarly found no relief, and the EPA's explicit lack of consideration to economic costs was upheld.[380] By asserting that "Congress intended claims of economic and technological infeasibility to be wholly foreign to the Administrator's consideration of a state implementation plan,"[381] Justice Thurgood Marshall's opinion ratified Congress' intentions and did much to resolve the language of the Act and correct the conclusions of the Circuit courts in earlier years. Thus, "[t]he decision in *Union Electric Co. v. EPA* affirmed the states' authority to set economically or technically infeasible emission limitations where necessary to achieve NAAQSs."[382]

Still, and despite tangential issues resulting from the decision that complicated enforcement procedures,[383] *Union* represented a qualified victory and a recognition of the Senate's intent to force technology and have the Act applied as a means of inducing innovation and effecting demonstrable change in favor of the public interest by improving public health metrics.[384] Without such

379. *Id.* at 254.

380. Schoenbrod, *supra* note 12, at 744–45; *see also Forcing Technology*, *supra* note 174, at 1713 n.3 ("[*Union*] resolved a sharp division among the circuits over the treatment of claims of economic and technological infeasibility). *Compare* Union Electric Co. v. EPA, 515 F.2d 206 (8th Cir. 1975), *aff'd*, 427 U.S. 246 (1976) and Indiana & Mich. Elec. Co. v. EPA, 509 F.2d 839 (7th Cir. 1975) (economic and technological infeasibility irrelevant to state plan approval), *with* St. Joe Minerals Corp. v. EPA, 508 F.2d 743 (3d Cir. 1975), *vacated as moot*, 425 U.S. 987 (1976), *and* Buckeye Power, Inc. v. EPA, 481 F.2d 162, 168-69 (6th Cir. 1973) (feasibility must be considered in state plan approval). *But see* Bunker Hill Co. v. EPA, 572 F.2d 1286, 1294 (9th Cir. 1977) (9th Circuit ignores *Union Electric*; requires EPA to show SIP emission limitation "is economically and technologically feasible.").

381. *Union Elec. Co.*, 427 U.S. at 256.

382. *Forcing Technology*, *supra* note 174, at 1715; *see also* Schoenbrod, *supra* note 12, at 769 ("When the adopted state implementation plans imposed stronger controls on emissions than authorities were later willing to enforce, the state or EPA could either not enforce the controls, or write compliance schedules that allowed sources to postpone action or to do less than the plan required."). *But see* MELNICK, *supra* note 16, at 216–17 (describing that *Union* did not represent an unqualified victory for Train's EPA or the intention of the Senate drafters, however, because Justice Marshall conceded several "safety valves," by the characterization of Melnick, such as justiciability of "claims of economic or technological feasibility" by the state court, the consideration of feasibility in issuing administrative orders under Section 113(a) and enforcement proceedings, and the consideration of those same factors by the courts in determining "appropriate relief").

383. For greater analysis of this issue, *see* MELNICK, *supra* note 16, at 217–20 (analyzing SIP compliance at district and appellate courts).

384. Kathleen D. Masters, "*Can't Do" Won't Do:* Union Electric Co. v. EPA, *427 U.S. 246 (1976)*, 1976 ARIZ. ST. L.J. 663, 669 ("Thus, the court held that it had no jurisdiction to hear the petition for review because Union Electric's claim of newly discovered information was an assertion of economic and technological infeasibility. Recognition that the Amendments were a drastic remedy to a dire situation played a principal role in the subsequent analysis by the Supreme Court. The Court read the Amendments and their legislative history to mean that Congress intended to use the Amendments to 'take a stick to the states,' to guarantee that air quality standards would be promptly attained and maintained. It noted that the Amendments place strict minimum compliance requirements upon the states, and that these requirements are of a 'technology-forcing character.' The Court viewed the Amendments as explicitly contrived to force development of pollution control techniques that might appear technologically or economically infeasible at the time that the state develops its pollution control plan" (footnotes omitted)).

backing from the courts, the central logic of technology forcing promoted by the Public Works Committee, as discussed above, may have fallen apart, along with the efficacy of stationary source regulation under the Act.[385] Thus Train, much like Ruckelshaus following the 1973 auto emissions controversy as cited by Judge Wilkey, was in a position to defer criticism of accepting overly strong SIPs and say, in essence, that the courts made him do it.

As the Republican Administrations around him became increasingly disenchanted, Train's second major contribution to the Clean Air Act was seeing through what Ruckelshaus began in the form of holding industry to strict deadlines, which created financial pressure on industry to innovate. Because Ruckelshaus denied the Title II deadline extension the previous year, and because the deadlines were set in 1975, the auto industry was effectively forced to stick with the emissions control technology in development at the time—the catalytic converter—with the blessing of Train.[386] Although neither the Clean Air Act nor EPA mandated any particular auto technology, the catalytic converter was presented by automakers as the sole frontrunner technology able to meet the Act's statutory auto emissions standards.[387]

The catalytic converter was no ace in the hole, however. Rare metals required for the new gadget were difficult to source and could be neutralized by leaded gas. Furthermore, evidence began to emerge in September 1973 that the converters produced unknown amounts of potentially harmful sulfuric acid vapor.[388] Eric Stork, leading the "mobile sources" pollution office of the EPA air quality program, warned of the dangers posed by such a technology as well as the emissions generated by catalytic converters on a commercial scale.[389]

At this juncture, Train was forced to make the difficult decision between taking the risk on catalytic converters or abandoning them, thereby acquiescing on the Clean Air Act's Title II deadline and the deadline extension denial of his predecessor. Allowing EPA to save face, Congress passed the Energy Supply and Environmental Coordination Act of 1974, which punted the deadlines until 1977 and offered a similar one-year deadline extension.[390] Train granted the one-year extension due to latent concerns over the sulfuric acid emissions posed by the catalytic converter. Although there was emerging evidence that any emissions were sufficiently small as to pose no real health threat, testimony

385. *See generally* Gerard & Lave, *supra* note 21.

386. Interview by Harold K. Steen, *supra* note 348, at 41–42 ("Actually we never ordered the use of the converters, we simply ordered the industry to go ahead and meet the standards by a given date, knowing that the only way they could do it was through the use of catalytic converters. . . . My decision finally was to go ahead with the catalytic converters.").

387. *Id.* at 41.

388. *Id.* at 41–42 ("[T]he use of a catalytic converter with gasolines that typically contain sulphur would produce a sulfuric acid aerosol, a very fine mist . . . which would have the ability to penetrate the human lungs very easily. It was an argument where there were a lot of fears expressed.").

389. Interview with Eric Stork, in East Falls Church, Va. (May 28, 2012) (on file with authors as Erik Stork Interview) (describing the "drama" of catalytic converters).

390. Energy Supply and Environmental Coordination Act, 15 U.S.C. § 791 (2020).

provided at the deadline hearings gave reason to doubt earlier evaluations.[391] Train considered the decision to commit to the catalytic converter, in concert with the deadline extension, the correct one, despite backlash from the environmental community.[392]

Despite granting industry an extension in 1974, Train's decision on the auto emissions issue represents no less authority or captaincy than Ruckelshaus' analogous decisions a few years prior. By maintaining a tough stance and publicly advocating for the Act's standards, also allowing Congress to take responsibility for the deadlines, Train demonstrated that the EPA could balance risks effectively in consideration of the public health.

In 1972, Ruckelshaus showed that the Clean Air Act and the EPA could be tough. A few years later, Train needed to show that it could balance discretion with adamance as the EPA's bureaucratic structure evolved and further matured under his leadership. As wide political buy-in was diminished, caution became increasingly important to prevent broad political backlash against the still-young EPA and Clean Air Act. By the end of his tenure, Train's dedication to the Act and EPA's mission in general were hardly in question, however. Even "Ralph Nader admitted having been mistaken in questioning whether [Train] . . . had the requisite toughness for the job."[393] Both Administrators deserve unqualified credit in making the Clean Air Act through their tireless work and leadership.

CONCLUSION

As we look back at the Clean Air Act on its fiftieth anniversary, it is easy to argue that it represents one of the most important environmental laws in the history of the United States and a watershed moment in the development of federal environmental law. This assessment rings true when we consider its impact on our physical environment and on human communities historically afflicted by polluted air. As Senator Muskie said before the Senate, "we all must recognize that the quality of our air is most valuable, most essential, to the quality of our environment and to the quality of our lives upon this planet."[394]

We might also credit the Clean Air Act as a first step of the modern federalization of environmental law and, in many ways, the foundation upon which the field of environmental law would emerge. Whereas Muskie's point was to help focus on the deterioration of the air that would have been familiar to

391. Chrysler Corp., Ford Motor Co., & Gen. Motors Corp., Applications for Suspension of 1977 Motor Vehicle Exhaust Emission Standards, Decision of the Admin., 40 Fed. Reg. 11,900 (1975).

392. *Russell E. Train: Oral History Interview*, *supra* note 115 ("I came down on the side of the catalytic converter, which, in hindsight, seems to have been the right decision. I like to think it was some great wisdom on my part, but I can't remember any great wisdom. In any event, it was a very tough decision. At one point, I did give the auto industry some additional time to meet the 90 percent reduction. Predictably, I caught all sorts of hell from the environmental community.").

393. TRAIN, *supra* note 2, at 180.

394. *See* SENATE CONSIDERATION OF THE REP. OF THE CONF. COMM. (Dec. 18, 1970), *reprinted in* 1 COMM. ON PUB. WORKS, A LEGISLATIVE HISTORY OF THE CLEAN AIR ACT AMENDMENTS, 1970, at 130 (1974).

Americans at the time, we today might similarly point to the improvements in air quality since the passage of the Clean Air Act in retrospect.

As a measure of our appreciation of the enactment, however, we ought to take time to recognize the key players who made it a reality. Senator Baker expressed his feelings on the Clean Air Act nearly thirty-five years after its passage, speaking on the accomplishments of the Senate Public Works Committee achieved through the Act's passage:

> We triggered a global change. As a result of our investment and the collective effort of a few committed men who gathered in a small committee meeting room, we charted a change in the course of history.
>
> . . . .
>
> Special interests today can weaken the law. They can change the law. But in the final analysis they won't roll back the continued commitment worldwide to emission reductions which we initiated 35 years ago.[395]

Many people responsible for the global shift created by the Clean Air Act, including Senator Baker, have often been unfortunately overlooked, but, to the extent that the Clean Air Act is worth celebrating at its golden anniversary, our celebration should honor the legacies of those who made it what it is today. The Air and Water Pollution Subcommittee in full, its staff, Administrators Ruckelshaus and Train, and many within the Nixon Administration have earned a place in the narrative of the making of the Clean Air Act.

395. Howard Baker, Ambassador to Japan, Address at the University of Tennessee, Knoxville (Mar. 9, 2005), http://www.muskiefoundation.org/baker.030905.html.